
The WORLD agreeable to the latest DISCOVERIES
The North Pole
The North Pole
South Pole
South Pole
West
East
NORTH AMERICA
THE PACIFIC OCEAN
ATLANTIC OCEAN
SOUTH AMERICA
SOUTH SEA
Equinoctial Line
Tropic of Cancer
Tropic of Capricorn
Antarctic Circle
EUROPE
ASIA
AFRICA
NEGROLAND
INDIAN OCEAN
New Holland
C of Good Hope
New Zealand
N Caledonia
Arctic Circle
Hudsons Bay
CHINA
Persia
Ethiopia
New Spain
C Horn
Str of Magellan
Van Diemens Land
T K Barell Sculp

A

VIEW of the EARTH:

Being a ſhort but comprehenſive

SYSTEM

OF

MODERN GEOGRAPHY.

EXHIBITING,

I. A Deſcription of the *Figure*, *Size*, *Motion*, &c. of the *Earth*; with the Uſes and Height of the *Atmoſphere*, or *Air* ſurrounding it.

II. Such Geographical *Definitions*, *Schemes*, and *Deſcriptions*, as form a neceſſary *Introduction* to this Branch of Learning.

III. The *Situation* and *Extent* of the ſeveral *Kingdoms* and *Nations* in each Quarter; their *chief City*; with the *Diſtance*, *Direction*, and *Difference* of *Time* from *London*.

IV. An Account of the ſeveral *Iſlands*, *Trade*, *Commodities*, *Religions*, Number of *Inhabitants*, principal *Mountains* and *Rivers* in the World; alſo ſome Obſervations on the *leſs known Parts*, the *Trade Winds*, and *Monſoons*.

V. The *Explanation* and *Uſe* of a new *Set of Maps*, annexed to the ſeveral Quarters, drawn according to the moſt approved *modern Projections*, and regulated by *Obſervations*.

VI. A *Deſcription* of Commodore *Anſon*'s Voyage round the World; ſhewing the ſeveral Iſlands and Countries he touched at; and the Places where he took any Prize, particularly the rich *Manilla* Ship.

VII. A new and curious *Geographical Clock*, which points out the *Difference of Time*, with the *Hour*, in the *different Nations* upon Earth, at one View.

To which is added,

A Deſcription of the Terreſtrial Globe:

WITH

Its Application to a great Variety of uſeful Problems. Concluding with ſome curious *Phænomena* exhibited upon the Globe in a *darkened Room*; and a few *ſelect Paradoxes* and *Theorems*, intended to excite the Attention of the Learner.

The Whole laid down in a Manner ſo *eaſy* and *natural*, as to be underſtood in a *few Days*.

Addreſſed to the *young Gentlemen* and *Ladies* of *Great Britain* and *Ireland*.

By the Reverend R. TURNER, LL. D.

Late of *Magdalen-Hall*, *Oxford*, Rector of *Comberton*, Vicar of *Elmly*, and Chaplain to the Right Hon. the Counteſs Dowager of WIGTON; Author of a *View of the Heavens*; the *Heavens Surveyed*; *Plain Trigonometry made Eaſy* by Calculations in Arithmetic only; and a *New Introduction to Book-keeping*.

The FOURTH EDITION, with many Additions and Improvements:

Particularly an Account of the lately diſcovered Countries and Iſlands in the Great South Sea; and alſo, a large Table of the *Longitude* and *Latitude* of all the remarkable CITIES and TOWNS in the World; being a neceſſary Appendage to the Uſe of the *Globe*.

There is not a SON *or a* DAUGHTER *of* Adam, *but has ſome Concern in both* GEOGRAPHY *and* ASTRONOMY. *Dr.* WATTS.

LONDON:

Printed for S. CROWDER, in PATER-NOSTER-ROW.

MDCCLXXXVII.

TO THE

YOUNG GENTLEMEN,

AND

YOUNG LADIES,

(However titled, or otherwiſe diſtinguiſhed)

Through all Parts of the BRITISH EMPIRE,

THIS compendious Syſtem of GEOGRAPHY,—a *Science* no longer eſteemed a *fine Accompliſhment only*, but a *neceſſary Part of uſeful Education* (as it impreſſes ſuch Knowledge of the World, of which you are Inhabitants, as muſt render You not only more ſerviceable to your COUNTRY in public Life, but more happy in your ſmaller Circles of Connection, and private Retirements*) is, with the profoundeſt Reſpect,

Dedicated and devoted

To your Services,

By

The AUTHOR.

* Mr. *Salmon* has told us in his Geographical Grammar, that *young Gentlemen*, without a general Knowledge of the State of the World—the Manners, Cuſtoms and Hiſtory of the ſeveral Nations his Cotemporaries, are neither *capable* of ſerving their *Country*, nor *qualified* for *Converſation*.—And Mr. *Echard* ſays—that no *ingenious Perſon* can be *excuſed* for his *Ignorance* in this *Science*.

*** The *Earth* is given us for an Habitation: 'Tis the Place of preſent Reſidence for all our *Fellow-Mortals:* Nor is it poſſible there ſhould be any *Commerce* maintained with thoſe, who dwell at a Diſtance, without ſome Acquaintance with the different Tracts of *Land*, and the *Rivers*, or *Seas*, that divide the *Regions* of the *Earth*.

A SHORT

SYSTEM

OF

MODERN GEOGRAPHY.

GEOGRAPHY is a Deſcription of the Earth, as it ſtands divided into *Land* and *Water*; for both theſe together conſtitute the Surface of our Globe:——And, is a *Science* not only curious and entertaining, but of the greateſt Uſe. It opens and enlarges the *Ideas*; gives you true Notions of the various Situations of Kingdoms, Nations, and People; and is of ſuch Conſequence in Hiſtory, that nothing can be underſtood (with Juſtneſs and Propriety) without it. Hence we find the great Mr. *Locke* recommending it in the warmeſt Manner. He is of Opinion, that *Youth* ought to *begin* with this Science, as an Introduction to their future Studies.

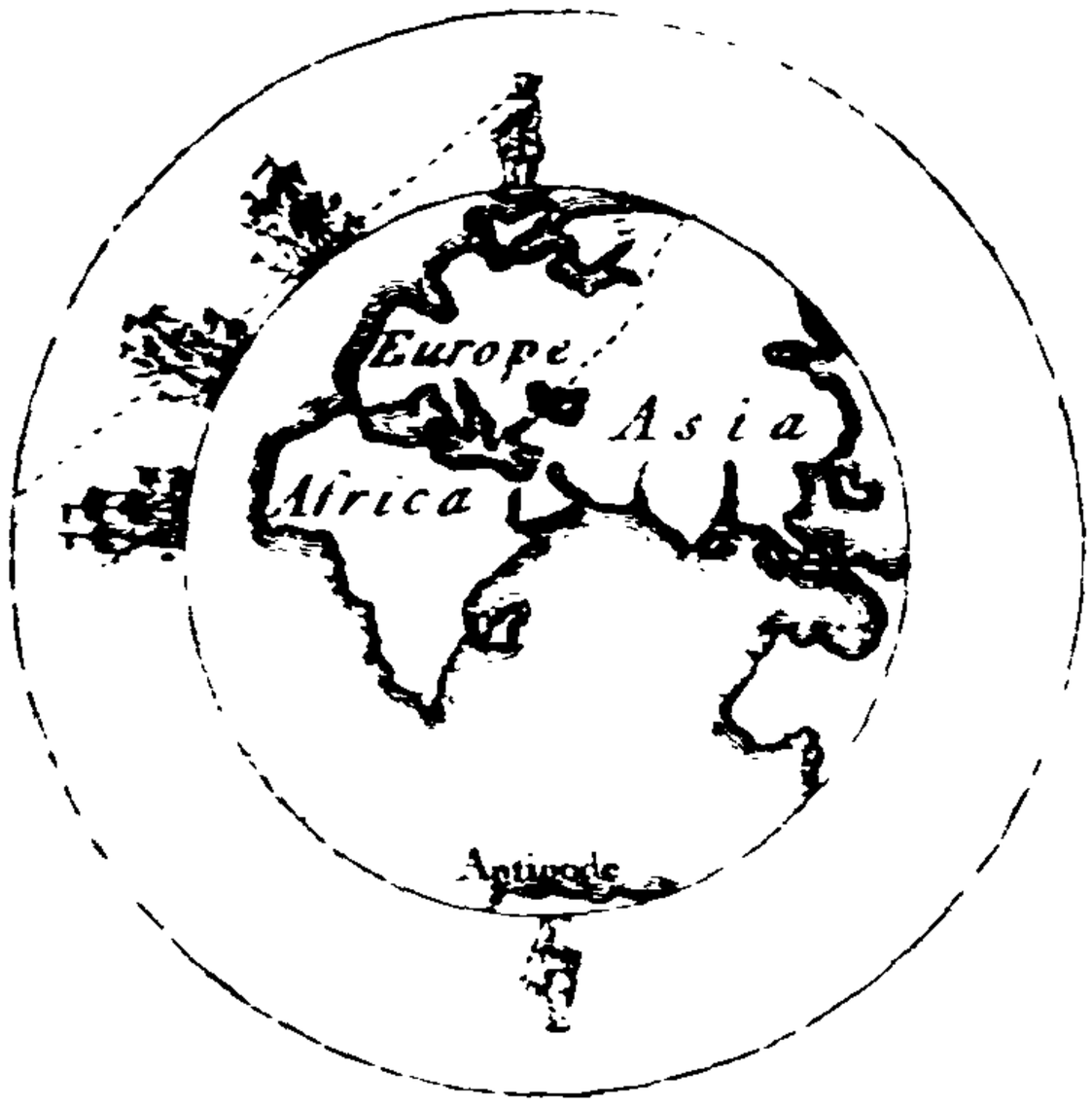
Many Volumes are already extant on this *Kind of Learning*, but their *Size* rather *deters* young *Minds*, than invites them to a Peruſal: The following *Compendium*, for this Reaſon, will not, I flatter myſelf, be *unacceptable*, as it exhibits (in one ſhort View) every Thing neceſſary to enable *Youth* to proceed to the larger Syſtems of *Geography* or *Hiſtory*, with Eaſe and Pleaſure.

THE EARTH, then, on which we live, is one of the *Planets* *; and, however it may appear from the little we can take in at one View, is a *large round Ball*, about 8000 Miles in *Diameter*, and nearly 25000 in *Circumference*. It turns once round upon its *Axis* from *Weſt* to *Eaſt* in 24 Hours, which makes the *Sun* and all the *Heavenly Bodies* appear to move the contrary Way, from Eaſt to Weſt, in the ſame Time; this is the Cauſe of the continual Returns of DAY and NIGHT. At the ſame Time, it advances in a *Circular Orbit* round the Sun (which remains fixed in the Center at the Diſtance of 81 Millions of Miles) in the Space of 365 Days, 6 Hours†. This produces the various *Seaſons* of the Year,—WINTER, SUMMER, AUTUMN, and SPRING.

* Our EARTH is the third Planet from the Sun, having *Venus* and *Mercury* below, and Mars, Jupiter, and Saturn, above it. Its true Diameter is 7964 Miles; and Circumference 25020 Miles. *See my View of the Heavens*, or *Introduction to Modern Aſtronomy*.

† Note, Theſe 6 Hours in 4 Years make one Day, which is added to February; then that Month hath 29 Days, and the Year is called Leap-Year; becauſe all the ſucceeding Days advance or Leap forward one Day more than they would do, if no ſuch Day was added.

That the LAND and WATER, taken together, make one *round* Body, is evident from the many Obſervations of Perſons ſtanding on the Shore and viewing a Ship departing from the Coaſt. They gradually loſe Sight firſt of the Bottom of the Veſſel, whilſt they can ſtill ſee the *Rigging* and *Flags* at the Top: But as the Ship proceeds on, they loſe Sight of theſe alſo; as if the Whole was ſunk into the Deep. Likewiſe in a Ship making to Land; the Mariners *firſt* perceive the Tops of *Steeples*, *Trees*, &c. pointing above the Water; *next*, they ſee the *Buildings*; and *laſt* of all, the *Shore*; which can only happen from the *Convexity* or *Roundneſs* of the Earth, as here delineated.



The *Roundneſs* of the *Earth* is alſo confirmed by the many *Voyages* which have been made about it, from *Eaſt* to *Weſt*; firſt——by *Magellan*'s Ship in the Years 1519, 1520, and 1521, in 1124 Days;——by Sir *Francis Drake* in the Years 1577, 1578, 1579, and 1580, in 1056 Days;——by Commodore *Anſon* in the Years 1740, 1741, 1742, 1743, and 1744, in 1375 Days; and laſtly——by Captain *Cook*, who ſailed from Plymouth the 26th of Auguſt, 1768, and after the moſt ſatisfactory Voyage that ever was undertaken, returned and anchored in the Downs, the 12th of June, 1771, having been abſent almoſt three Years.—Many other Engliſh Gentlemen have lately navigated round the Globe; as the Captains *Byron*, *Wallis*, *Carteret*, *&c.**

The little *Unevenneſs* of the Earth's Surface, ariſing from Hills and Vales, is no material Objection to its being conſidered as *round*; ſince the higheſt *Mountains* bear not ſo great a Proportion to the Bulk of the Earth itſelf, as the little *Riſings* in the Coat of an *Orange*, bear to the Bigneſs of that Fruit.

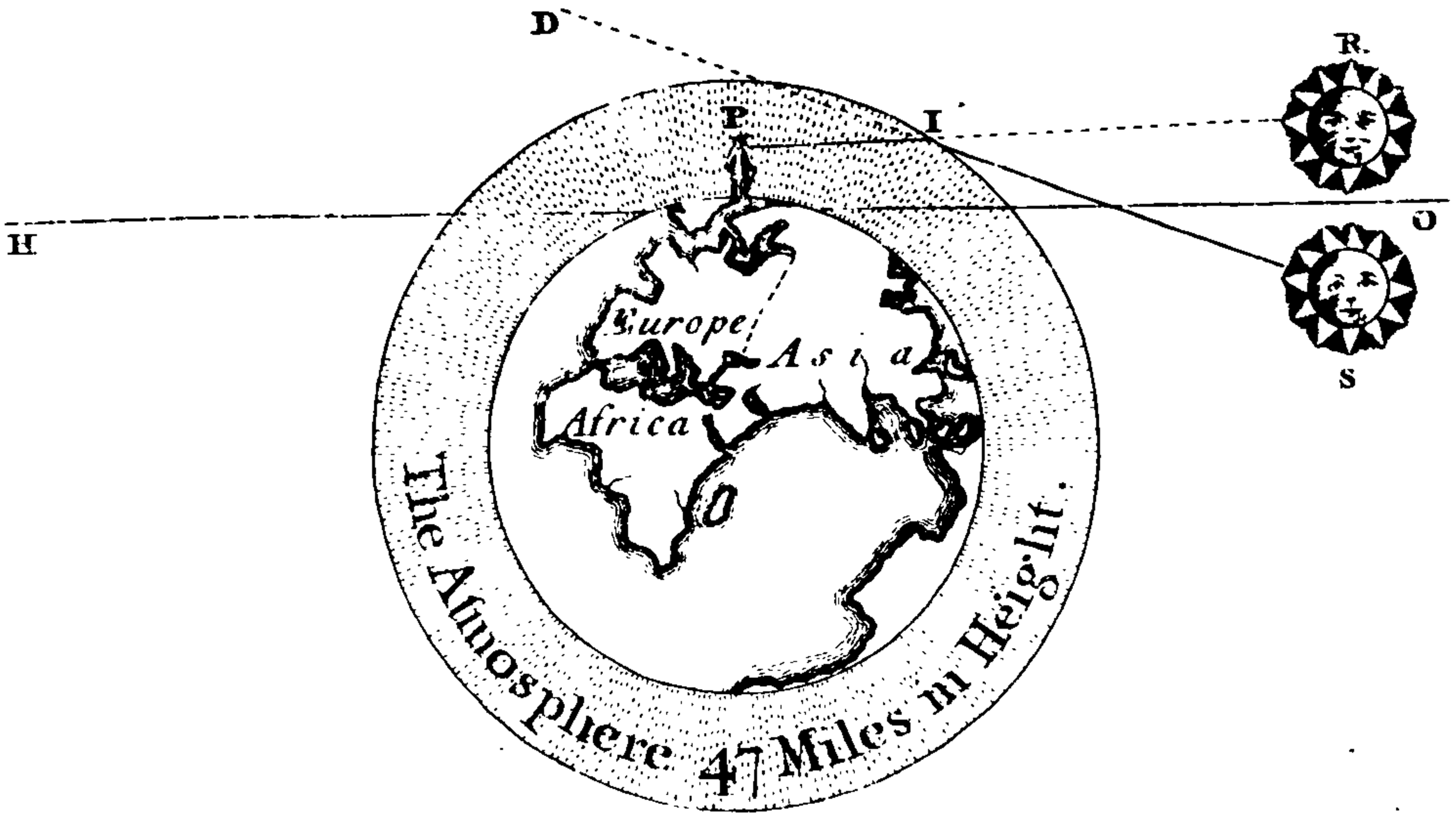
Thoſe People who inhabit that Part of the Globe exactly under us, are called ANTIPODES: their Feet are over againſt ours; when 'tis Noon with us, 'tis Midnight with them; and *our* Summer is *their* Winter.

* The general Opinion of the *Ancients* was, that the Earth was a large extended plain Surface like a round Table; and all below was *Hades* or *Hell*; and that the *Sun* and the reſt of the Heavenly Bodies deſcended into the *Weſtern Ocean* every Night, and roſe out of the *Eaſtern* every Morning. And not many Ages ago, the Notion of *Antipodes* was zealouſly oppoſed: but all theſe Abſurdities are now given up, being obliged to *yield to Obſervation and Experience*. For, our *Mariners* frequently ſail round the Globe, and tranſact Buſineſs with the *Antipodes* of many Nations *daily*.

The

The EARTH reſts upon *Nothing*, but is poiſed in the Heavens, and ſurrounded with a Number of ſmall *Atoms*, called the *Atmoſphere*, or Air, which gradually grows thinner and lighter, the higher we aſcend from its Surface. Its whole Height is ſuppoſed to be about 46 or 47 Miles; but on the higher Mountains, as the *Alps* in *Italy*, and the *Andees* in *America*, it is ſo very *rare*, or *thin*, that we breathe with great Difficulty; and very probably at the Diſtance of 6 or 8 Miles from the Earth, no *Animal* or *Bird* could live.

The *Uſe* of this *Atmoſphere* is not only to ſuſpend the *Clouds*, furniſh us with *Winds* and *Rain**, and ſerve to the common Purpoſes of *Breathing*; but is alſo the Cauſe of the *Morning* and *Evening Twilight*, and of all the *Glory* and *Brightneſs* of the *Firmament*.



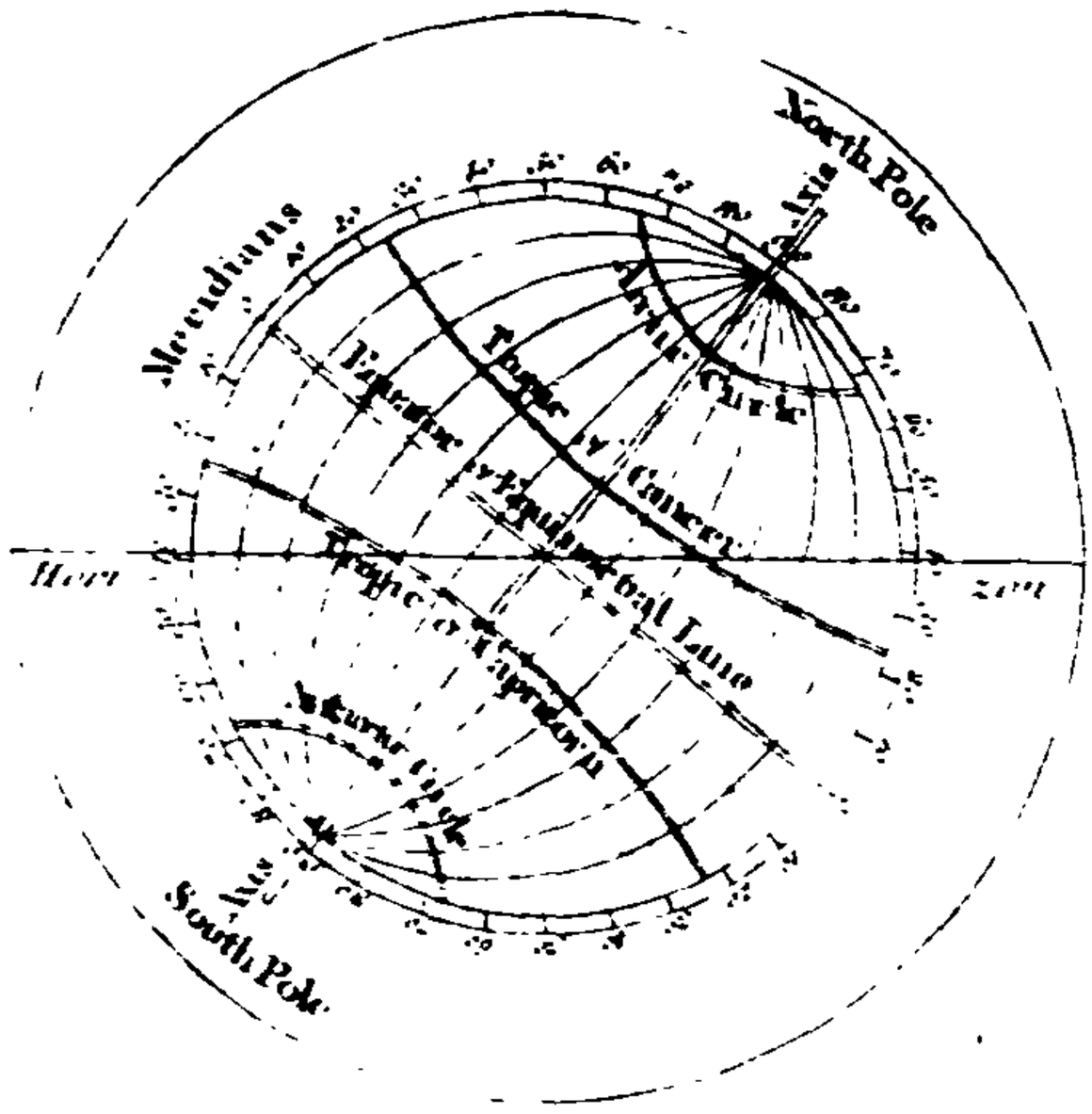
This Figure repreſents the Earth ſurrounded with its Atmoſphere;—H O is the *Horizon* of a Perſon ſtanding at P;—alſo, S repreſents the Sun as yet really under the Horizon, from which a Ray S I aſcends, and falling upon the upper Part of the Air at I, is, by the Reſiſtance it meets with there, bent out of its direct Courſe towards D, into the Oblique one I P; and ſo falling upon the Eye of the Spectator, he will then ſee the Sun in the Direction of this refracted Ray at R, a whole Breadth, or a little more, above its true Place.

By this Means we are favoured with the Sight of the Sun about 3 Minutes and $\frac{1}{4}$ every Morning before it riſes above the *Horizon*, and alſo as much every Evening after it ſets below it; which, in one Year, amounts to more than 40 Hours; and ſo much *Sunſhine* are all the Inhabitants on every Part of the Globe bleſſed with, more than they could be, without ſome ſuch Divine Contrivance.

* *Clouds* are only Vapours or Steams of Water raiſed up and ſuſpended in the Atmoſphere. *Winds* are only the Particles of the Atmoſphere put into Motion,——and, *Rains* are theſe Clouds falling again to the Earth, when the Atmoſphere grows too light (on account of ſome Winds or Rarefaction taking Place) to ſupport them.

GEOGRAPHERS,

GEOGRAPHERS, for the better underſtanding this Science, have imagined the Globe to be circumſcribed, and divided with ſeveral *Lines* and *Circles*, whoſe *Names*, *Situation*, &c. are as here delineated.



The Line going through the Center of the Globe is called its *Axis*: the Ends are the *two Poles*; the upper one the *North*, the lower the *South*. On this Line the Earth is ſuppoſed continually to move round in 24 Hours to cauſe the Returns of *Day* and *Night*.

The Line or Circle encompaſſing the Middle of the Globe, dividing it into two equal Parts, between the North and South Poles, is called the *Equator* or *Equinoctial Line*. When the Sun is over this Line (as in *March* and *September*) it is *equal Day* and *Night* all the World over.

The Circles on each Side the Equator, 23 Degrees and $\frac{1}{2}$ from it, are called the *two Tropics*: They limit the Sun's greateſt *Diſtance* from the *Equinoctial* either *Northward* or *Southward*.—That on the North-Side is the *Tropic of Cancer*; when the Sun is over this Line (as in *June*) 'tis our Summer, and the Days are at the longeſt.——That on the South-Side is the *Tropic of Capricorn*; when the Sun is over that (as in *December*) 'tis our *Winter*, and the Days are at the ſhorteſt with us; but at the longeſt with thoſe who live on the South-Side of the *Equinoctial Line*.

The two Circles near the Poles, about 23 Degrees and $\frac{1}{2}$ from them, are called the two *Polar Circles*.——That at the North Pole is alſo called the *Arctic Circle*; the other at the South, the *Antarctic Circle*.

The

The Lines running from Pole to Pole acroſs the *Tropics* and *Equinoctial* are called *Meridians*. There are generally 24 drawn upon the Globe, correſponding to the 24 Hours of Day and Night. When any of them (as the Earth turns round) is brought oppoſite the *Sun*, it is then *Noon Day* along that Line from Pole to Pole*.

The Line going acroſs the Middle of the Globe, dividing it into two Hemiſpheres, is called the *Horizon*. When the Sun aſcends above this Line in the Eaſt, it is Day with us; but when it deſcends below it in the Weſt, it is Night. This is called alſo the *Rational*, or *True Horizon*: But beſides this, there is a *ſenſible* or *viſible Horizon*, which is that Circle ſurrounding us, and bounding our View, when we ſtand in the open Field.—The Horizon ſhews not only the riſing and ſetting of the Sun, Moon, and Stars,—the Length of Day and Night, &c. but alſo marks out the principal *Points* of the World; for the Places where the *Meridian* and *Horizon* cut each other, are called *North* and *South*; and the Places where the *Equator* and *Horizon* cut each other, are termed the *Eaſt* and *Weſt*. You may ſee this more fully explained at Page 9.

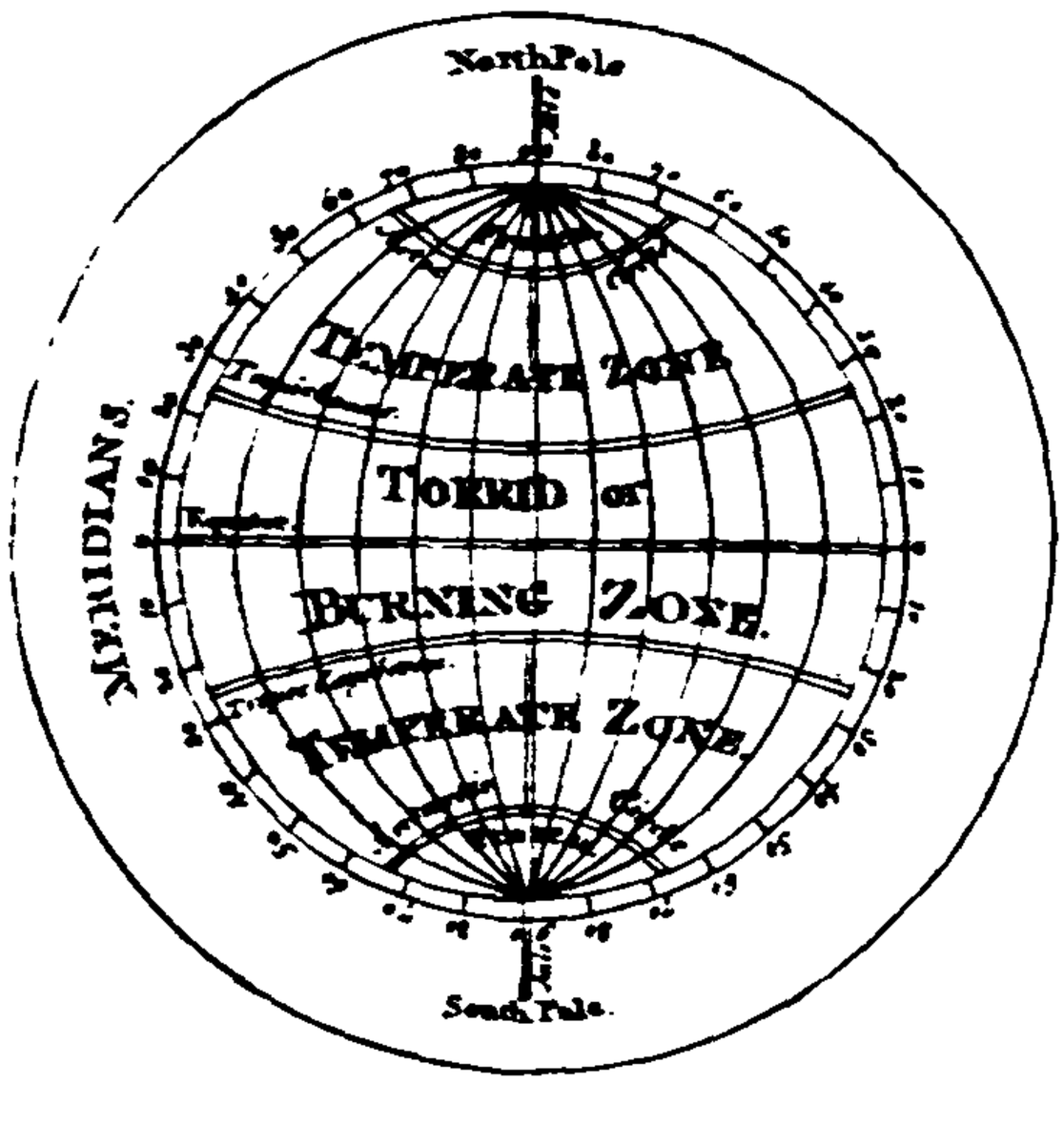
There is generally an *oblique* Line drawn from *Tropic* to *Tropic*, croſſing the *Equinoctial*, (as may be ſeen in the Map at the Beginning of the Book) repreſenting the Sun's apparent Path in the Heavens, which is called the *Ecliptic*; but as there cannot, in Fact, be any ſuch Line upon the Earth, and as a much better Method of ſhewing the apparent Motion of the Sun may be ſubſtituted in its Room, I have, therefore, in this Scheme, omitted it.

Note, The *Equator*, *Ecliptic*, *Meridians*, and *Horizon*, are called *great Circles*, becauſe they cut the Globe in two *equal Parts*; but the *Tropics* and *Polar* Circles are called *leſſer* Circles, as they cut the Globe in two *unequal* Parts.

Every Circle on the Globe, whether great or ſmall, is ſuppoſed to be divided into 360 equal Parts or Diviſions, called *Degrees*; and each of theſe Degrees into 60 other equal Parts, called *Minutes*.—So that *every Circle*, of whatever Magnitude it is, contains 360 Degrees;—the *Half*, or *Semi-Circle*, 180;—and the Quarter, or *Quadrant*, 90.

* The *Meridians* are infinite in Number, for every Place from Eaſt to Weſt may be ſuppoſed to have a ſeparate one.——Of theſe Meridians, One is called the *Firſt* or *Chief Meridian*, from which the *Longitude* of Places begins to be reckoned: It is of great Note, and has been variouſly placed by *Geographers*; but now each Country fixes it at the Middle of their own *Capital* City.

As *each* LINE upon the Globe has its diſtinct Name, ſo the ſeveral Spaces included by theſe Lines are particularly diſtinguiſhed. They are called *Zones*, or *Belts*, and are *five* in Number.



All the Space between the two *Tropics*, (which is 47 Degrees broad) is called the *Torrid* or *Burning Zone*; becauſe the Sun, being always over ſome Part of it, muſt make it exceeding hot and ſcorching.

The Spaces between the *Tropics* and *Polar Circles* (each 43 Degrees in Breadth) are called the two *Temperate Zones*; for in theſe the Heat is moderate, the Sun never coming over the Heads of the Inhabitants.

The Spaces included within the *Polar Circles* (each of which being 47 Degrees over) are the two *Frigid* or *Frozen Zones** ; ſo called on account of the extreme Cold and Ice always found there.

Latitude is the neareſt Diſtance of any Town or Place from the *Equator*, either Northward or Southward, accounted in Degrees and Minutes; each Degree being 60 computed, or 70 meaſured Miles.

Longitude is the Diſtance of any Place from a *fixed Meridian*, (as ſuppoſe that of *London*) either Eaſtward or Weſtward, in Degrees and Minutes.—Longitude has reſpect to *Time*; every Degree of which is equal to four Minutes.—Thus, if a Place lies one Degree to the *Eaſt* of us, it is four Minutes in Time *before* us; but, if it lies one Degree to the *Weſt*, it is four Minutes *after* us.

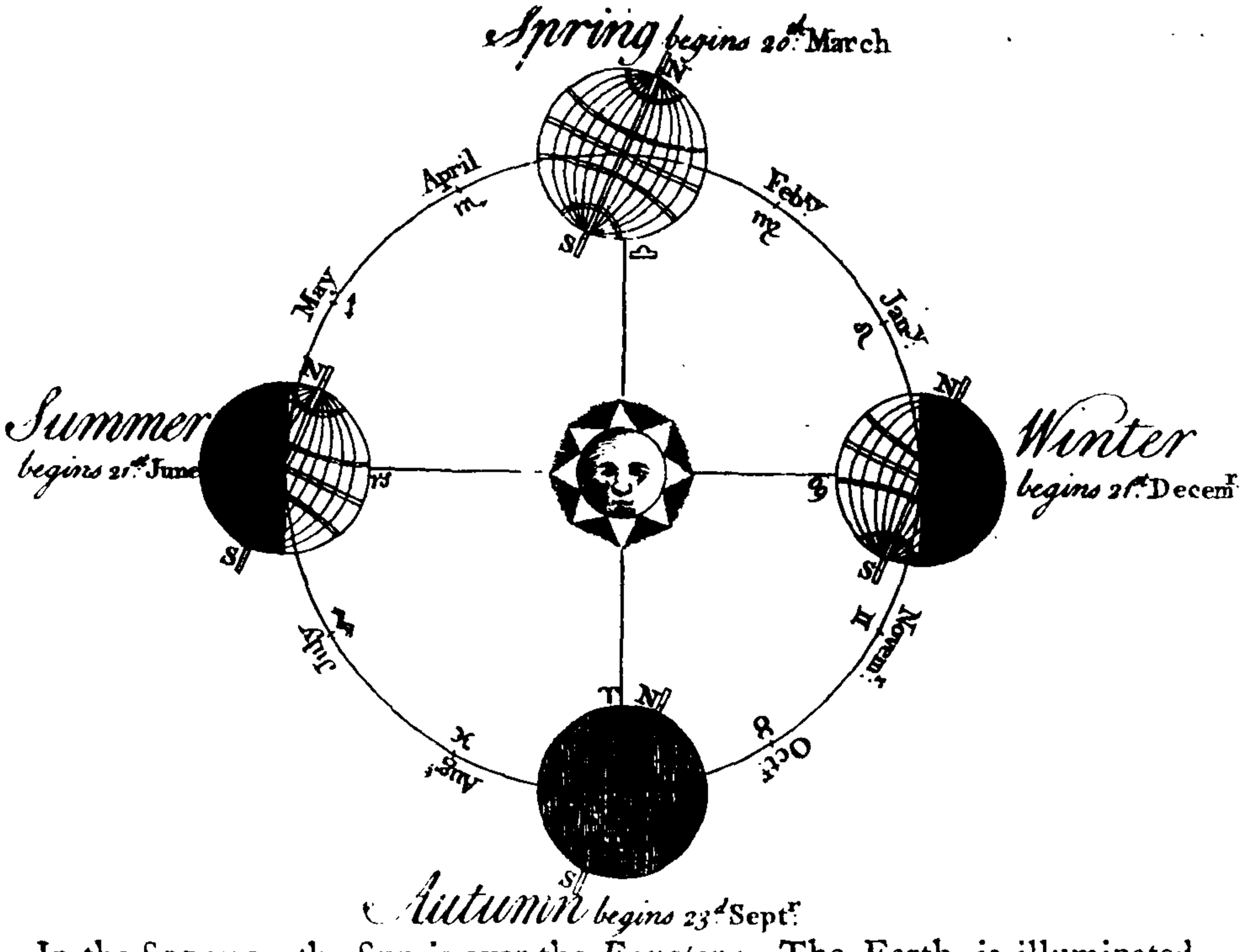
Note, A Degree of *Longitude* at the *Equator* is 60 Miles, equal to a Degree of *Latitude*; but then theſe Degrees are continually growing leſs and leſs, as the Meridian Lines approach to each other, till they arrive at the Poles, where a Degree meaſures (you ſee) nothing at all.

* The *Kingdoms*, *Countries*, and *Seas*, ſituated in theſe ſeveral *Zones*, are ſeen by caſting the Eye on the *Map* of the *World*, at the Beginning of the Book.

The

The MANNER in which the Earth revolves, to cauſe the various Changes in the Length of the Day, and *Viciſſitudes* of the Year, is exhibited in the following *Scheme*.

The Earth, in its *annual* Motion, has its *Axis* always inclined * in the ſame Direction (or *parallel* to itſelf) and moves from *Weſt* to *Eaſt* in 365 Days 6 Hours, and upon this *Poſition* depends the *Variety* of all the *Seaſons*.



In the SPRING, the Sun is over the *Equator*: The Earth is illuminated from Pole to Pole; and the *Days* and *Nights* are equal all the Globe over. ——In the SUMMER, the North Pole is turned to the Sun; he is over the *Tropic of Cancer*; our Days are now at the *longeſt*, and the South Pole is involved in Darkneſs.——In AUTUMN, the Earth is arrived to that Part of her Orbit oppoſite the Spring, and the Sun is got over the *Equator* again. Now both Poles are illuminated, and it is *equal* Day and Night as in the Spring.——In the WINTER, the South Pole becomes turned to the Sun, which is then over the *Tropic* of *Capricorn*; the Days are then at the *ſhorteſt* with us, and the North Pole is wrapt in Obſcurity and Shade.

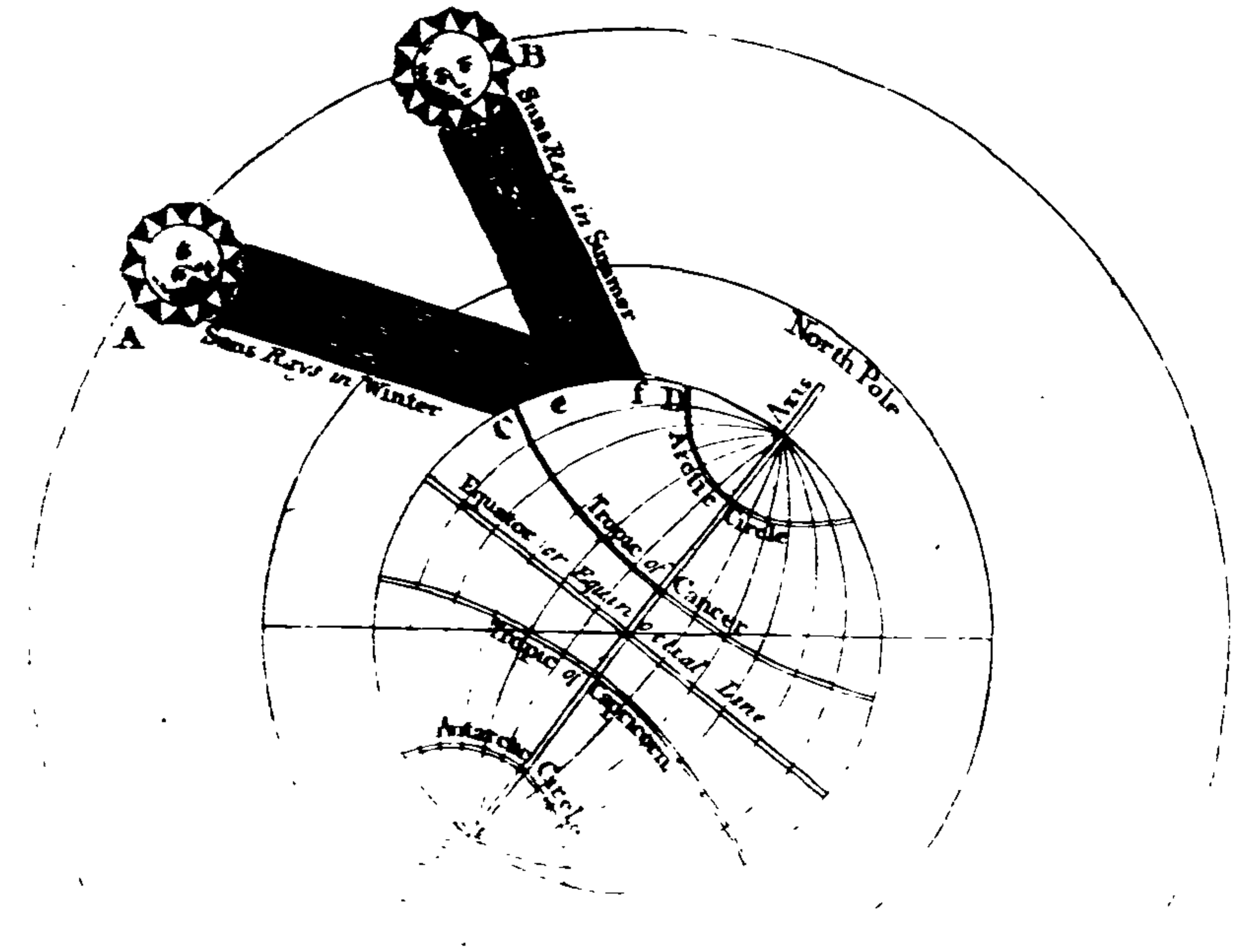
The *Earth* does not revolve in an exact *Circle*, but in an Orb a little *Elliptical*; it muſt, therefore, be ſometimes nearer the Sun, ſometimes farther *from* him:—Muſt ſometimes *move ſlower*, and ſometimes *faſter*. This is the *Reaſon* why our *Summer* half Year, when the Earth is *fartheſt from* the Sun, is *longer* than the *Winter* half, by about 8 *Days*, when it is *nearеſt*.

* The *Unlearned* generally think, that the *Earth* ſtands *ſtill*, and the *Sun moves*, to cauſe Day and Night; and produce *Scripture* to confirm their Opinion: But they ſhould remember, the Scripture was not given to teach *Geography* or *Aſtronomy*, but *Religion*; and therefore theſe Books, in this Reſpect, ſpeak only according to the *Appearances* of Things; not as they are in *Fact*. See more of this in my *Aſtronomy*. In the mean Time, I would juſt obſerve, that every *Cook* daily ſhews the Abſurdity of the vulgar Opinion: For, we never ſee them turn the Fire round the Meat; but the Meat always round to the Fire; by which Means, it becomes far more equally warmed and dreſſed.

The

The nearer any Place is to the Pole, the longer are its Days in the Summer, and the ſhorter in the Winter: At the very Pole, the Day is ſix Months; and in Winter, the Night is juſt the ſame.

The Reaſon of the greater Heat in Summer than in Winter, is becauſe the Sun is not only *longer*, but *higher* above the Horizon; conſequently, his Rays comes to the Earth in a Direction more *perpendicular* to its Surface, and ſtrike it more forcibly in Summer than in Winter, when the Sun is *lower*, and ſends his Rays more *oblique* and *feeble*, and ſcattered over a larger Part of it.

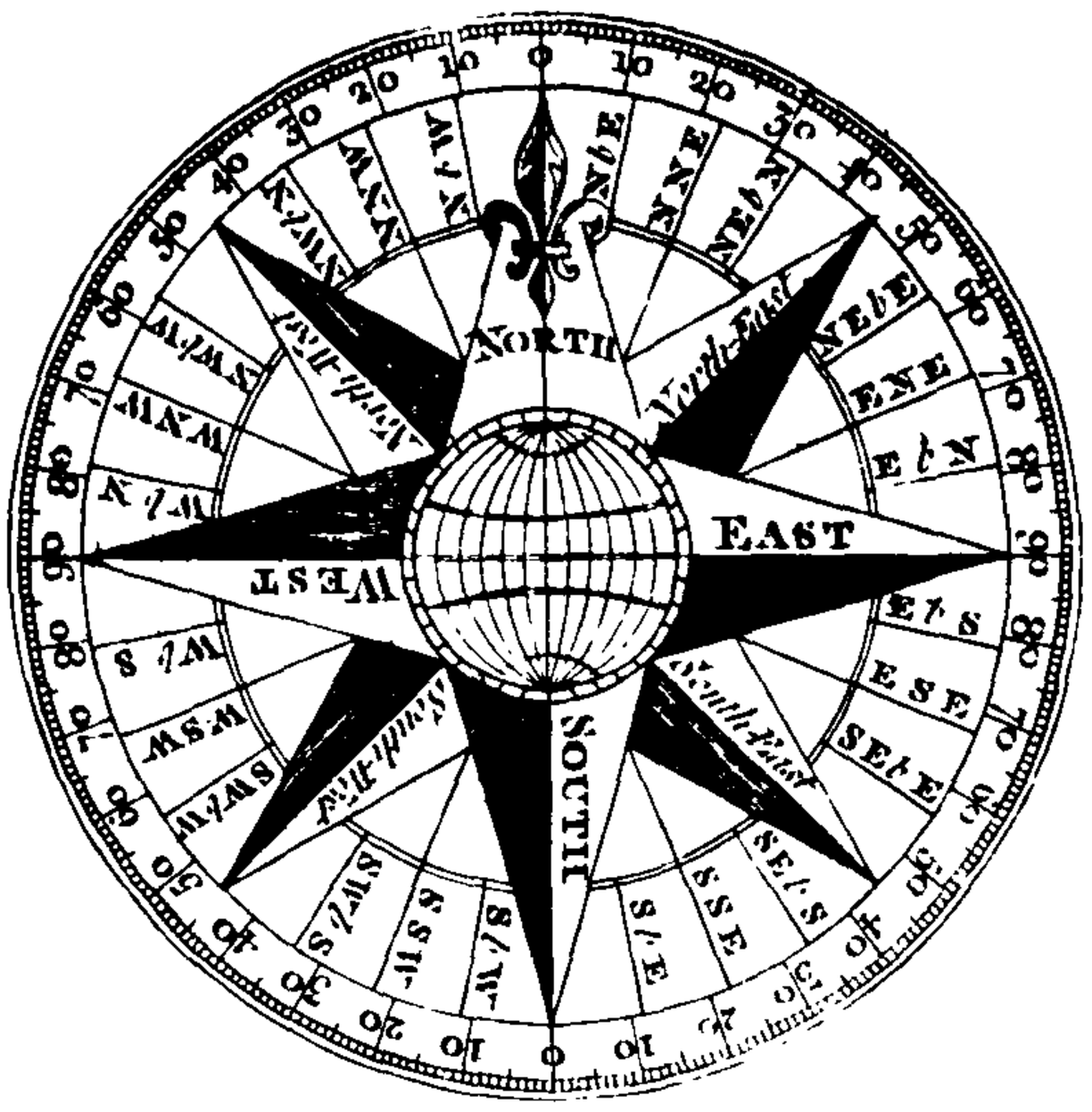


Let A repreſent the Height of the Sun at Noon in *Winter*, and B the Height in *Summer*: Then in the *former* Caſe, the parallel Rays, which fall upon the Ground, and ſcatter over it from C to D, will, in the latter Caſe, occupy only the narrow Space *e f*; conſequently, as it is much *leſs*, it muſt be more *hot* than before. The Rays of the Sun, alſo, paſſing through a much greater Part of the *Atmoſphere* in *Winter* than *Summer*, muſt come to us more *weak* and *faint* in the former State than in the latter. Theſe Circumſtances, joined with the longer *Continuance* of the Sun with us in the *Summer*, than in *Winter*, is ſufficient to produce the great Diſproportion of *Heat* we experience in thoſe two different *Seaſons* of the Year.

That

That LARGE CIRCLE, which ſeems to ſurround us, when we ſtand upon ſome little Hill, or Eminence, in the open Fields, and bounds our View, is called the *Horizon*. Every Part of this Circle is exactly 90 Degrees from the Center of it over our Heads, which Point is called *Zenith*, and the Point of the Heavens, *oppoſite* or under our Feet, is called the *Nadir*.

This *Great Circle* is ſuppoſed to be divided into 4 equal Parts, reſpecting the four principal *Quarters* of the World.—*Eaſt*, *Weſt*, *North*, and *South*, and each of theſe is alſo ſubdivided into 8 other equal Parts, making in all 32, which are called the 32 Points of the *Compaſs*; whoſe Names, Situation, *&c.* are as in the following *Figure*.



The *Learner*, perhaps, will not find the Time *loſt*, he ſhall ſpend in committing theſe 32 Points of the *Compaſs* to *Memory*, as they will enable him to aſcertain the *Direction* of the *Winds*, *Clouds*, or any *Object* from him.

If this *graduated Circle* be drawn upon Paper or Paſteboard, and a Wire touched on a Loadſtone, be paſted on the under Side, and then hung by the Means of a little Braſs Cap fixed in the Center, on a Pin erected in the Middle of a *Braſs* or *Wood* Box covered with a Glaſs, it will always turn its Points to the correſpondent Points of the World; conſequently it becomes of infinite Uſe in conducting the *Mariner* through the extenſive *Ocean*, and the *Traveller* over the pathleſs *Deſarts*, which are met with in many Parts of the Earth.

Little *Machines* of this Sort, neatly fitted up for the Pocket, in ſmall Braſs Boxes, are to be had at any *Toy-Shop* in Town or Country, at *One Shilling* each.

The GLOBE, as I obſerved before, is compoſed of *Land* and *Water*.

The LAND is about *one third* of the whole Surface, and is generally divided into the following Parts, viz.

1. CONTINENTS, which are large Tracts of Land, containing many Kingdoms, and Countries; as Europe, Aſia, Africa, &c.——2. ISLANDS, are Parts of Land ſurrounded by the Sea, as Britain, Ireland, Madagaſcar, and Japon.——3. PENINSULAS, are ſuch Parts of Land, as are encompaſſed by Water, except one narrow Part, by which it is joined to the main Land, as Jutland at the Top of Germany, and Morea in Greece.——4. ISTHMUS's are narrow Necks of Land joining the Peninſulas to the main Land, as the Iſthmus of Darien, or Panama, in America: the *Iſthmus* of *Corinth* joining the *Morea* to *Greece*.——5. PROMONTARIES, or CAPES, are thoſe high Parts of Land, which ſhoot far into the Sea, as Cape Verde, and the Cape of Good Hope, both in Africa.——6. COASTS or *Shores* are thoſe Parts of a Country, which border upon the Sea, as the Coaſt of *France*; the Coaſt of *Barbary*. Hence ſailing near the Shore is called *Coaſting*.

The Extent of the WATER on the Earth's Surface is far greater than that of the Land; it is computed to be *two thirds* of the whole Globe, and is diſtinguiſhed by the following Diviſions.

1. OCEANS, which are vaſt Collections of Water free from Land, as the *Atlantic*, *Ethiopic*, and *Pacific* Oceans.——2. SEAS, are leſs Extenſions of Water, almoſt ſurrounded by Land, as the Mediterranean, Baltic, and Euxine; all the reſt are but *Parts* of Oceans, and receive their Names from the Land that lies next them: as the Iriſh Sea, the *Britiſh* Seas.——3. LAKES, are Tracts of Water, wholly ſurrounded by Land, as the Lake of Geneva, the Caſpian and Dead Seas.——4. GULPHS, are only *Parts* of the Sea running up into, and every-where bounded with Land, except one Part by which it communicates with the Sea; as the Gulphs of Bothnia, Venice, Perſia, and Florida.——5. STREIGHTS are narrow Paſſages of Water joining one Sea to another, as the Streights of Gibraltar, leading into the *Mediterranean*, the Streights of Babalmandel, leading into the *Red Sea**.

We come now to deſcribe the GRAND DIVISIONS of the Earth, viz. *Europe*, *Aſia*, and *Africa*, called the *Old World*, being all that was known to the Ancients: And *North* and *South America*; called the *New World*, on Account of their being diſcovered but about 294 Years ago, *i. e.* in the Year 1492.

* If a *Gulph* is very large, it is called an Inland Sea, as the *Mediterranean Sea*. If it is not ſo large, nor runs ſo *far* into the Land, it is called a Bay; as the *Bay of Biſcay* in *France*. If it is but ſmall, and runs but a little Way into the Land, it is called a *Creek*, or *Haven*; a Station or Road for Ships; as *Milford Haven* in *Wales*.

EUROPE


Long West from London
Long East from London
EUROPE
FROZEN OCEAN
Whale Fishery
WESTERN or ATLANTIC OCEAN
BAY OF BISCAY
GERMAN OCEAN
SWEDEN
RUSSIA
MOSCOVY
POLAND
GERMANY
HUNGARY
FRANCE
SPAIN
PORTUGAL
ITALY
TURKEY
BLACK SEA
ANATOLIA
CASPIAN SEA
MEDITERRANEAN
BARBARY
HOLY LAND
Shetland
Bergen
Stockholm
Edinburgh
London
Berlin
Warsaw
Dresden
Prague
Vienna
Paris
Madrid
Lisbon
Barcelona
Rome
Naples
Constantinople
Smirna
Aleppo
Bagdad
Nineveh
Morocco
Fez
Malta
Rhodes
CYPRUS
Madeira I.
Str. of Gibralt.
CORSICA
SARDINIA
SICILY
Archangel
Moscow
Astracan
Samara
Kazan
Tripoly
Palmyra

EUROPE is bounded on the *North* by the Frozen Ocean—on the *Eaſt* by Aſia, and the Rivers Don, Walga, and Oby—on the *South* by the Mediterranean,—and on the *Weſt* by the great Atlantic Ocean, being about 3000 Miles in *Length*, and 2500 in *Breadth*. It is the leaſt Quarter, but of the moſt Renown, for the Temper of the *Air*; the Fruitfulneſs of the *Soil*; Study of the *Arts* and *Sciences*; but above all, for the Eſtabliſhment of the *Chriſtian Religion*. It contains the following *Kingdoms* and *States*.

	Kingdoms.	Length.	Breadth.	Chief City.	Diſt. & Bearing from London.	Diff. of Time from London.	Religions.	Numb. of Inhab.
					Miles.	H. M.		
Britiſh Empire.	England	360	300	London	* * *	* * *	Lutherans, &c.	7 Mill.
	Scotland	300	150	Edinburgh	270 N.	0 12 aft.	Calviniſts	2 Mill.
	Ireland	300	150	Dublin	250 N. W.	0 26 aft.	Luth. Calv. & Pap.	2 ½ Mill.
	Norway	1000	300	Bergen	550 N.	0 24 bef.	Lutherans	2 ½ Mill.
	Denmark	240	180	Copenhagen	480 N. E.	0 50 bef.	Lutherans	
	Sweden	800	500	Stockholm	750 N. E.	1 10 bef.	Lutherans	3 Mill.
	Ruſſia	1500	1100	Peterſburgh	1140 N. E.	2 4 bef.	Greek Church	20 Mill.
	Poland	700	680	Warſaw	760 E.	1 24 bef.	Papiſts	15 Mill.
	PruſſianDominions	Uncertain		Berlin	540 E.	0 59 bef.	Luth. and Calv.	Uncertain.
	Germany	600	500	Vienna	650 E.	1 5 bef.	Pap. Luth. & Calv.	20 Mill.
	Bohemia	300	250	Prague	600 E.	1 4 bef.	Papiſts	2 ½ Mill.
Netherlands.	Holland	160	100	Amſterdam	150 E.	0 18 bef.	All Religions	3 Mill.
	Flanders	180	150	Bruſſels	180 S. E.	0 16 bef.	Papiſts	1 ½ Mill.
	France	600	500	Paris	160 S. E.	0 9 bef.	Papiſts	22 Mill.
	Spain	700	500	Madrid	690 S.	0 17 aft.	Papiſts	9 ¼ Mill.
	Portugal	300	100	Liſbon	840 S. W.	0 38 aft.	Papiſts	2 Mill.
	Switzerland	260	100	Bern	420 S. E.	0 28 bef.	Calv. and Papiſts.	2 Mill.
Italy.	Lombardy	Several ſmall States; Piedmont, Montferrat, Milan, Parma, Modena, Mantua, Venice, Genoa, Tuſcany, &c. Chief Towns are, Turin, Caſal, Milan, Parma, Modena, Mantua, Venice, Genoa, Florence.						
	Popedom	240	150	Rome	780 S. E.	0 52 bef.	Papiſts	1 ¼ Mill.
	Naples	270	180	Naples	870 S. E.	1 0 bef.	Papiſts	3 ¼ Mill.
	Hungary	300	200	Buda	780 S. E.	1 17 bef.	Papiſts	3 Mill.
Turkey in Europe.	Danubian Provinces	600	420	Conſtantinople	1320 S. E.	1 58 bef.	Mahometans, with ſome Jews and Chriſtians	8 Mill.
	Lit. Tartary	380	240	Caffa	1500 E.	2 24 bef.		
	Greece	400	240	Athens	1230 S. E.	1 37 bef.		
	Sardinia Iſland	135	57	Cagliari	The King reſides at *Turin*, in Italy.		Papiſts	2 ½ Mill.

The *Situation* of the ſeveral *Kingdoms* and *States*, with the *principal* Towns in each, you will find inſcribed in the adjoining Map, with their *Diſtances* and *Poſitions* exactly laid down with reſpect to each other.

The *Europeans* in general are well made, and tolerably fair, except in *Spain*, where they begin to be *ſwarthy*:—In *Dreſs*, they are fond of imitating the *French*.—The *Spaniards* and *Hungarians* wear *Whiſkers*.—The *Turks* long Beards, Turbants, and a long Veſt tied with a Sath.—The *Turkiſh Ladies* Dreſs much reſembles that of the Men.

The

The COMMODITIES of theſe Countries are, in the *Northern Parts*, as in *Norway*, *Sweden*, and *Denmark*,—*Pitch*, *Tar*, *Roſin*, *Hemp*, *Deals*, *Maſts*, *Oaks*, *Furs*, *Iron*, *Coal*, *Tin*, and *Fiſh*.——In the Middle, as *Great Britain*, northern Part of *France*, *Holland*, *Germany*, and *Poland*,—*Corn*, *Cyder*, *Perry*, *Hops*, *Cattle*, *Salt*, *Lawn*, *Lace*, *Cambrick*, *Woollen Cloth*, *Leather*, *Gloves*, *Clocks*, *Watches*, *Hardware*, *Toys*, *Paper*, *Hats*, and *Glaſs*.——In the *South*, as in *Portugal*, *Spain*, *Italy*, and *Turkey*,—*Wine*, *Allom*, *Amber*, *Rice*, *Raiſins*, *Oranges*, *Lemons*, *Marble*, *Cottons*, *Velvets*, and *Mohair*.

The ISLANDS of this Quarter are, in the *North*,—*Greenland*, famous for its Whale Fiſhery.—And *Iceland*, in which is the burning Mountain *Hecla*, ſuppoſed by its frequent Eruptions, to be the Cauſe of the *Northern Lights*; it belongs, with the little Iſles of *Farro*, together with thoſe of *Zealand* and *Funen*, &c. in the *Baltic*, to the Crown of Denmark.——Near *Great Britain*, are the *Shetland* Iſles, the *Weſtern* Iſles, *Orkneys*, *Man*, *Angleſea*, *Scilly*, *Wight*, *Jerſey*, *Guernſey*, ſubject to the *Engliſh*.——On the *Weſt*, are the *Azores*, Nine in Number, the Chief, St. *Michael*; St. *Maria*, *Tercera*, and *Graciоſia*; the Trade is *Wine* and *Sugar*; and all belong to the King of Portugal.——In the *Mediterranean* Sea are *Ivica*, *Majorca*, and *Minorca*, belonging to *Spain*—and *Corſica*, belonging to the *French*.——*Sardinia*, a Kingdom of itſelf.——*Sicily*, belongs to the King of *Naples*, and in it is the burning Mountain *Etna*.——*Malta* belongs to its own Governor, called the *Grand Maſter*.——*Corfu*, *Cephalonia*, and *Zant*, are ſubject to the *Venetians*.——*Cyprus*, *Candia*, *Rhodes*, *Patmos*, and the Cluſter of ſmall ones in the *Archipelago*, belong to the *Turks*.

The principal MOUNTAINS in this Part of the World are the *Dolphrino* Hills, between Sweden and Norway; the *Hyperboræan* or *Riphæian* Mountains in the North Part of Muſcovy;—the *Caparthen* Mountains in the South Part of Poland;—the *Pyrenean* Hills between Spain and France;—the *Alps* between Italy and Germany;—the *Appenine* Hills dividing Italy into Eaſt and Weſt;—*Veſuvius*, a remarkable burning Mountain near *Naples*;—the *Peak* in England;—*Plinlimmon* in Wales;—and *Grampian* and *Cheviot* Hills in Scotland.

In this Quarter, the moſt noted RIVERS are, the *Thames*, *Severn*, and *Humber*, in England; *Forth*, *Tay*, and *Tweed*, in *Scotland*;—*Shannon*, *Boyn*, and *Barrow*, in Ireland;—*Rhine*, *Elbe*, and *Oder*, in *Germany*;—*Weiſel*, *Neeſter*, and *Neeper*, in Poland;—*Tayo* and *Duero* in Portugal;—the *Ebro* and *Guadalquiver* in Spain;—*Tiber* and *Po* in Italy; *Don*, *Walga*, and *Dwina*, in Ruſſia;—*Seine*, *Loire*, *Rhone*, and *Garonne*, in France; and the *Danube*, which runs all through Germany, Hungary, Turkey in Europe, and empties itſelf into the *Black Sea*.

The greateſt CURIOSITY in this Quarter is the Whale Fiſhery, among the Fields of Ice, which have been encreaſing for Ages upon the Coaſt of Greenland. A Whale is uſually 60 or 80 Feet long; affords from 60 to 100 Barrels of Oil, from his Fat; and 4 or 500 Pieces of *Whalebone*, which is taken from his Jaws or Gills. This Trade is chiefly carried on by the *Engliſh* and *Dutch*. One Whale is valued generally at 1000, or 1200l.

ASIA.


Long West 15 from London
Orkney Is
Pomona
Long East
BRITISH EMPIRE
Scale of Miles
30 60 90 100 130
WESTERN ISLANDS
St Kilda
N Vist
S Vist
Barra
Rum I
Coll I
Tyree I
I Mull
Jura
Ila
Stavanger
NORWAY
Dunbeth
Firth of Dornoch
Firth of Cromartie
Bamf
Fraserburg
Buchan Ness
Peterhead
Aberdeen
SCOTLAND
Montross
Firth of Forth
N Berwick
Berwick upon Tweed
Holy I
Coquet I
Newcastle
Tyne R
Durham
Tees R
Scarboro
Flamboro Hd
York
Spurn Hd
Humber R
Lincoln
Yarmouth
Norwich
Orford
Harwich
GERMAN OCEAN
HOLLAND
AMSTERDAM
Hague
Rotterdam
Briel
Goree
Londonderry
Coleraine
Arran I
Antrim
Ulster
Dunnegall
Armagh
Sligo
Killala
Connaught
Achil I
Drogheda
Tuam
IRELAND
Athlone
Dublin
Galloway
Sth Is of Arran
Leinster
Killaloe
Kilkenny
Limerick
Arklow
Loop Hd
Shannon R
Clonmel
Wexford
Munster
Dingle
Dingle Bay
Waterford
Lismore
Cork
Youghall
Kilmare Bay
Bantry Bay
Cloyne
Kinsale
C Clear
Mizen Hd
WESTERN OCEAN
I Man
Douglas
IRISH SEA
Holy Hd
Anglesey
Beaumaris
Liverpool
Chester
Manchester
Sheffield
Derby
Cardigan
Aberistwith Bay
Lichfield
Coventry
Worcester
Cambridge
Ipswich
St Davids
Milford Hn
Pembroke
Carmarthen
Gloucester
Oxford
London
Thames R
Bristol Chan
Bristol
Bath
Rochester
Canterbury
Dover
Wells
Winchester
Salisbury
Hartland Pt
Barnstable
Exeter
Dorchester
Chichester
Portsmouth
Rye
St GEORGES CHANNEL
St Ives Bay
Penzance
Plymouth
Lands End
Falmouth
Dartmouth
Start Pt
Lizard Pt
Scilly Is
Wight I
ENGLISH CHANNEL
Alderney
Guernsey
Jersey
C la Hogue
Cherbourg
Middleburg
Ostend
Newport
Dunkirk
Ghent
Calais
FLANDERS
Lisle
Bologne
Montreuil
Abbeville
Dieppe
Amiens
FRANCE
N
W
E
S
55
50
10
20
0
60 Minutes after London
Minutes before London

THE BRITISH EMPIRE lies on the Weſtern Part of *Europe*, and is wholly ſurrounded by the Sea: It contains—*Great Britain*, *Ireland*, and the *Iſles* thereunto adjoining; as expreſſed in this Map.

Great Britain is in Length 630 Miles, but of different Breadths in different Places; is ſurrounded by the Sea, and contains *England*, *Scotland*, and *Wales*; being the largeſt Iſland in Europe.

England is parted on the *North* from *Scotland* by the Rivers *Tweed* and *Solway*; on the *Eaſt* it is waſhed by the *German Ocean*; on the *South* by the *Channel*; and on the *Weſt* parted from *Wales* by a Line drawn from the Iſle of *Angleſey* round *Flintſhire*, by *Shropſhire* and *Herefordſhire*, down to the End of the River *Severn*.

England is about 360 Miles long, and 300 broad:—Contains 40 Counties: *Wales* is 124 Miles long, and 100 broad, and contains 12 Counties. The *Name* and *Chief Town* of each County, with its *Diſtance* from *London*, the Capital City,—the Number of *Pariſhes*, *Market Towns*, and *Members* of *Parliament* are expreſſed in the following Table.

Counties	Circ.	Mark. Towns	Par.	Memb. Parl.	Chief Towns	Diſt. f. Lond.
Bedfordſhire	73	10	116	4	Bedford	47
Berkſhire	120	12	140	9	Reading	39
Buckinghamſhire	138	16	185	14	Buckingham	57
Cambridgeſhire	130	9	163	8	Cambridge	51
Cheſhire	112	13	68	4	Cheſter	182
Cornwall	150	26	161	44	Launceſton	210
Cumberland	168	15	90	6	Carliſle	301
Derbyſhire	130	11	106	4	Derby	126
Devonſhire	200	39	394	26	Exeter	169
Dorſetſhire	150	22	248	20	Dorcheſter	123
Durham	107	9	118	4	Durham	256
Eſſex	146	27	415	8	Colcheſter	51
Glocеſterſhire	138	30	280	8	Glocеſter	104
Hampſhire	100	24	253	24	Southampton	76
Hertfordſhire	130	20	120	6	Hertford	21
Herefordſhire	120	8	176	8	Hereford	132
Huntingdonſhire	67	6	79	4	Huntingdon	57
Kent	160	33	408	18	Canterbury	56
Lancaſhire	170	27	61	14	Lancaſter	233
Leiceſterſhire	96	12	192	4	Leiceſter	99
Lincolnſhire	180	35	630	12	Lincoln	135
Middleſex	81	6	200	6	LONDON	—
Monmouthſhire	80	7	127	4	Monmouth	129
Norfolk	140	32	660	12	Norwich	109
Northamptonſhire	120	14	326	9	Northampton	66
Northumberland	160	13	460	8	Newcaſtle	270
Nottinghamſhire	90	9	168	8	Nottingham	121
Oxfordſhire	130	14	280	9	Oxford	53
Rutlandſhire	40	2	48	2	Okeham	94
Shropſhire	135	17	170	14	Shrewſbury	155
Somerſetſhire	204	35	385	18	Briſtol	117
Staffordſhire	141	19	150	9	Stafford	125
Suffolk	140	30	575	16	Ipſwich	69
Surry	112	13	140	14	Guildford	30
Suſſex	158	17	312	28	Chicheſter	63
Warwickſhire	135	14	158	7	Warwick	93
Weſtmoreland	120	8	26	4	Appleby	267
Wiltſhire	140	22	304	34	Saliſbury	80
Worceſterſhire	130	12	152	9	Worceſter	112
Yorkſhire	320	56	563	30	York	197
NORTH WALES.						
Angleſey	80	3	74	2	Beaumaris	241
Carnarvonſhire	110	5	68	2	Carnarvon	251
Denbighſhire	116	6	57	2	Denbigh	209
Flintſhire	81	5	28	2	Flint	194
Merionethſhire	108	3	37	1	Harlech	223
Montgomeryſhire	94	5	47	2	Montgomery	161
SOUTH WALES.						
Brecknockſhire	106	4	61	2	Brecknock	163
Cardiganſhire	94	5	77	2	Cardigan	224
Carmarthenſhire	108	5	87	2	Carmarthen	208
Glamorganſhire	112	9	118	2	Cardiff	165
Pembrokeſhire	93	7	45	3	Pembroke	236
Radnorſhire	90	4	53	2	Radnor	150

The RIVERS of principal Note in *England* are—the *Thames*, *Severn*, *Trent*, *Humber*, *Medway*, *Ouſe*, *Tine*, *Avon*, *Derwent*, *Merſy*, &c.——In *Wales*, the *Wye* and *Dee*.

The moſt noted HILLS in *England* are—the *Peak* in Derbyſhire; *Malvern* in Worceſterſhire; *Mendip-Hills* in Somerſetſhire.—In *Wales*—*Snowden-Hills*, *Plinlimon*, and the *Black-Mountains*.

In *England* are 22 BISHOPRICKS; in *Wales* 4; which make in all 26 Biſhops; of which 2 are *Arch-Biſhops*, *Canterbury* and *York*. There are alſo in England 2 famous Univerſities—*Oxford* and *Cambridge*: The former of which contains 20 *Colleges* and 5 *Halls*; the latter contains 12 Colleges and 4 Halls.—In *Wales* there is no Univerſity.

The eſtabliſhed RELIGION in *England* and *Wales* is *Lutheraniſm*. The *Inhabitants* are about 7 Millions in Number; of which almoſt 1 Million and a Half live in and about London.

SCOTLAND lies on the North of England, parted from it by the Rivers *Tweed* and *Salway*; and is about 300 Miles long and 150 broad. It is divided by the River *Tay*, which runs near the Middle of it, into 2 Parts;—*Highlands* and *Lowlands*, which contain 34 *Shires*, in which are many populous Towns and Villages, but the Capital City is *Edinburgh*, distant from London about 270 Miles North.

In the *Lowlands* (next England) are these 22 COUNTIES.—1. *Tiviotdale*, 2. *March*, 3. *Tweedale*, 4. *Liddesdale*, 5. *Esdale*, 6. *Anandale*, 7. *Niddesdale*, 8. *Galloway*, 9. *Carrick*, 10. *Kyle*, 11. *Cunningham*, 12. *Arran*, 13. *Clydesdale*, 14. *Lenox*, 15. *Sterling*, 16. *Fife*, 17. *Strathern*, 18. *Menteith*, 19. *Argyle*, 20. *Cantire*, 21. *Lorne*, and 22. *Lothien*.

In the *Highlands* are these 13 COUNTIES.—1. *Lochabar*, 2. *Broadalbin*, 3. *Perth*, 4. *Athol*, 5. *Angus*, 6. *Merns*, 7. *Mar*, 8. *Buchan*, 9. *Murrey*, 10. *Ross*, 11. *Sutherland*, 12. *Caithness*, and 13. *Strathnavern*.

The Chief CITIES are the 4 Universities; viz. *Edinburgh*, *Aberdeen*, *Glasgow*, and *St. Andrews*.

The principal RIVERS in Scotland are the *Tweed*, *Clyde*, *Tay*, and *Spay*, all navigable; besides many *Lakes*, of which *Lemund* and *Ness* are the most remarkable.

The MOUNTAINS of Note are the *Chivot-Hills*, and those of *Albany*.

The established RELIGION here is the *Presbyterian*:—Consequently they have no *Bishops*.—The *Inhabitants* about 2 Millions.

IRELAND lies West of England, is wholly surrounded by the Sea, and parted from *Great Britain* by St. George's Channel, which in some Places is 60 Miles over, in others not so much as 20. *Ireland* is in Length about 300 Miles, in Breadth about 150. 'Tis usually divided into 4 Provinces—*Linster*, *Munster*, *Connaught*, and *Ulster*, which contain 32 *Counties*, in which are several Cities and populous Towns; but the Capital is *Dublin*, about 250 Miles North West of London.

In LINSTER are 12 Counties——1. *East-Meath*, 2. *West-Meath*, 3. *Louth*, 4. *Longford*, 5. *Kings-County*, 6. *Queens-County*, 7. *Catherlogh*, 8. *Kilkenny*, 9. *Kildare*, 10. *Waxford*, 11. *Wicklow*, and 12. *Dublin*.

In MUNSTER are 5 Counties——1. *Cork*, 2. *Kerry*, 3. *Limerick*, 4. *Tipperary*, and 5. *Waterford*.

In CONNAUGHT are 6 Counties——1. *Sligo*, 2. *Letrim*, 3. *Roscommon*, 4. *Galway*, 5. *Mayo*, and 6. *Clare*.

In ULSTER are 9 Counties——1. *Antrim*, 2. *Down*, 3. *Armagh*, 4. *Cavan*, 5. *Londonderry*, 6. *Donnegal*, 7. *Fermanagh*, 8. *Tyron*, and 9. *Monagan*.

Their noted CITIES besides *Dublin*, are *Limerick*, *Waterford*, *Kinsale*, *Cork*, *Athlone*, *Galloway*, *Londonderry*, &c. They have 4 Arch-Bishops, viz. *Armagh*, *Dublin*, *Cashel*, and *Tuam*; and 18 Bishopricks.——*Dublin* is their only *University*, and is one of the largest and finest Cities in Europe.

The most noted RIVERS here are the *Shannon*, *Barrow*, *Saver*, *Foyn*, *Nasr*, and *Blackwater*.——The Country abounds in *Lakes*, but the chief are—*Lough-Earn*, *Lough-Neagh*, and *Lough-Corrib*.

The chief MOUNTAINS are *Knock-Patrick*, *Slew-Bloom*, and *Carlow-Hills*.

The RELIGION established here is *Lutheranism* as in England; but the Inhabitants professing *Popery* are more than 3 Parts in 4 of the whole Kingdom. The *People* are about 2 Millions and a Half.

The ISLANDS round Great-Britain are the *Shetland* and *Orkneys* North of Scotland; they are many but small, the chief *Mainland* and *Pomona*.—The *Western Islands*, *Lewis*, *Sky*, *Mull*, *Ila*, *Jura*, *Ila*, *Arran*, and *Bute*—In the *Irish Channel* are *Man* and *Anglesey*.—In the *English Channel* are *Wight*, *Jersey*, *Guernsey*, *Sark*, and *Alderney*. And at the Lands End are the little, but dangerous Isles of *Scilly*.

ASIA
FROZEN OCEAN
LAPLAND
FINLAND
Arctic Circle
RUSSIAN TARTARY
MOSCOVY
SIBERIA
CHINESE TARTARY
INDEPENDENT TARTARY
KALMUCKS
TARTARY
BUKARIA
Samarcand
USBECK
PERSIA
Ispahan
THIBET
CHINA
Peking
COREA
JAPAN
Jeddo
Yellow Sea
MOGULS EMPIRE
INDIA
ARABIA
MEDITERRANEAN S.
Tropic of Cancer
Surat
Bombay
Calicut
BAY OF BENGAL
C. Comorin
Colombo
CEYLON
Canton
Formosa
Ainan
LUCONIA
Manilla
PHILIPPINE ISLANDS
LADRONE or MARIAN ISLANDS
AFRICA
EASTERN
OCEAN
Equinoctial Line
BORNEO
SUNDA ISLANDS
JAVA
Timor
NEW GUINEA

ASIA lies East of Europe, is about 4800 Miles *long*, and 4300 *broad*, bounded on the *North* by the Frozen Ocean, by the Pacific on the *East*, by the Red Sea on the *West*, and the Indian Ocean on the *South*. This, though the Second, is yet the *principal* Quarter of the Globe; for here our *first Parents* were created, and placed in the Garden of *Eden*; here once ſtood the famous *Tower of Babel**. In this Country our Saviour was born, and compleated our Redemption. *This* was, in ſhort, the Theatre of almoſt every Action recorded in the ſacred Scriptures. It is divided into many principal *Regions*, whoſe *Names*, *Extent*, chief *Cities*, *&c.* are as under.

	Nations.	Length	Breadth	Chief City.	Diſt. & Bear. from London	Diſt. of Time fr. London.	Religions.
Tartary.	Ruſſian	The Bounds of theſe Parts are unlimited, each Power puſhing on his Conqueſts as far as he can.		Tobolſkoi	2160 N. E.	4 10 bef.	Chriſtians & Pagans
	Chineſe			Chynian	4480 N. E.	8 4 bef.	Pagans
	Mogulean			Tibet	3780 E.	5 40 bef.	Pagans
	Independant			Samercand	2800 E.	4 36 bef.	Pagans
	China	1440	1000	Pekin	4320 N. E.	7 24 bef.	Pagans
	Mogals	2000	1500	Delly	3720 E.	5 16 bef.	Mahomet. & Pagans
	India	2000	1000	Siam or Pegu	5040 E.	6 44 bef.	Pagans
	Perſia	1600	1200	Iſpahan	2460 E.	3 20 bef.	Mahometans
Turky in Aſia.	Arabia	1300	1200	Mecca	2640 S. E.	2 52 bef.	Mahometans
	Syria	270	160	Aleppo	1860 E.	2 30 bef.	Chriſt. & Mahomet.
	Holy Land	210	90	Jeruſalem	1920 S. E.	2 24 bef.	Chriſt. & Mahomet.
	Natolia	750	308	Burſa or Smyrna	1440 S. E.	1 48 bef.	Mahometans
	Diarbick or Meſapotamia	560	310	Bagdad	2160 E.	2 56 bef.	Mahometans, with ſome few Chriſtians.
	Turcomonia	360	300	Erzerum	1860 E.	2 44 bef.	
	Georgia	* * *	* * *	Teflis	1920 E.	3 10 bef.	

The *Turks*, *Perſians*, *Moguls*, and *Chineſe*, are of good Shape and Complexion: The *Men* wear *Turbants*, *Veſts*, and *Slippers*; the *Women* dreſs much like the Men, only they wear a ſtiffened Cap like a *Mitre*, and their Hair down. The *Mogul* Ladies are fond of *Bracelets* on their Arms and Legs; *Rings* on their Fingers and Toes, *Jewels* in their Noſes, and *Pendants* in their Ears: and the *Chineſe Ladies* are remarkable for their *little Feet*; and the *Gentlemen* for *long Nails*. In *Siam*, *Pegu*, &c. the Inhabitants are *Tawney*, and Features *coarſe*. The *Men* wear a Piece of Cloth wrapped round their Waiſt, and pull their *Beards* (as the *Chineſe* and *Tartars* do) up by the Root. The *Women* have, beſides the Piece about their Waiſt, another thrown round their *Breaſts* and *Shoulders*, leaving the reſt of the Body *bare*. The *Common People* near the Sea go almoſt *naked*.

* In this Quarter ſtood the Temple of *Diana*, at Epheſus in Natolia, burnt the Night Alexander the Great was born. Near to that ſtood the famous City *Troy*, totally deſtroyed by the Greeks, 1200 Years before Chriſt. Here alſo ſtood the ſeven *Churches* mentioned by St. John in the Revelations. — Alſo *Tyre* and *Sydon*, on the Coaſt of the Holy Land, once vaſt Cities of Trade, but now the Habitation of a few *Fiſhermen*. — Likewiſe *Sodom* and *Gomorrah*, large Cities deſtroyed by Fire from Heaven for their Wickedneſs. — Alſo *Nineveh* and *Babylon*, great Cities in *Meſapotamia*, near *Bagdad*, now the Habitation of only *Owls*, *Tygers*, *Serpents*, and *Bats*. In the Holy Land ſtood the famous *City* and *Temple* of *Jeruſalem*, deſtroyed by *Veſpaſian* about 70 Years after *Chriſt*.

The

The TRADE of theſe Parts in Tartary is in *Sables*, *Martins*, *Furs*, *Iron*, &c.—In the other *Parts*, *Silk*, *Garſe*, *Seeſees*, *Carpets*. *Tapeſtry*, *Mohair*, *Muſk*, *Cinnamon*, *Aloes*, *Rhubarb*, *Ginſeng*, *Myrrh*, *Camphire*, *Coffee*, *Incenſe*, *Manna*, *Spices*, *Nutmegs*, *Tea*, *Drugs*, *Gold Duſt*, *Quickſilver*, *Diamonds*, and fine *China*, *Laquered* and *Japan* Ware.

In this Quarter are alſo *Camels*, *Dromedaries*, *Buffaloes*, *Elephants*, *Lions*, *Tygers*, *Serpents*, *Locuſts*, *Scorpions*, *Ora-Ootans* and *Champanzeys*, which are Animals almoſt as big as a Man, and greatly *reſemble* the *Human Shape*.

The ISLANDS in *Aſia* are thoſe of *Japon*, as *Japon* itſelf, *Tonſa* and *Bongo*,—alſo *Formoſa*,—the *Baſhee* Iſles, very ſmall,—*Aynan* and *Macco*.—The *Ladrone* Iſles, the chief *Guam* and *Tinian*.—The *Phillippine* Iſles 11,000 in Number, chiefly ſmall ones; the principal are *Luconia*, *Mindanao*, and *Tendayes*.—The *Moluccas* or *Clove* Iſlands, the chief *Gilolo*, *Ceram*, *Macaſſar*, *Amboyna*, and *Banda*, where the *Nutmegs* grow.—The *Sunda* Iſles, *Borneo*, *Java*, and *Sumatra*, &c.—The *Andaman* and *Nicobar* Iſles, all ſmall.—The *Maldives*, many Thouſands very ſmall, in the Indian Sea,—and *Ceylon*, or fine *Cinnamon* Iſle, near the Coaſt of Coromandel.

Moſt of theſe Iſlands lying near or *under* the *Line*, afford great Quantities of *Sugar* and *Spice*, which the *Dutch* trade with to all Parts of the World. The Inhabitants, who are of a Tawney or Olive Colour, and go almoſt naked, uſe Bows and *poiſoned Arrows*, are ſuperſtitious and groſs Idolaters; and in ſome Places (it is ſaid) offer their *Children* in *Sacrifices* to their *Idol Gods*.

The principal RIVERS in this Quarter are the *Tigris* and *Euphrates*, between Arabia and Perſia.—*Tobol* and *Oby* in *Tartary*.—*Indus* in the Mogul's Empire.—*Ganges* in *India*,—the *Hoambo* or *Yellow* River in the North; and the River *Tay*, that runs by Canton, in the South of *China*.

The chief MOUNTAINS here are *Ararat*, near the Caſpian Sea, on which the Ark reſted after the Flood.—*Horeb* and *Sinai* in Arabia.—*Lebanon* in the Holy Land.—Mount *Taurus* running from Eaſt to Weſt of all Aſia.—*Imaus* in Tartary.—*Caucaſſus* between Tartary and the Great Mogul's Empire,—and the *Naugracut* Mountains in Tibet.

In this Quarter one great CURIOSITY is, the vaſt Brick Wall in *China*, 1500 Miles long, 30 Feet high, and broad enough for 8 Perſons to ride abreaſt, fortified with a ſquare Tower, at the Diſtance of every Mile: It was built about 1800 Years ago to keep out the roving *Tartars*, and it is at this Time very little decayed.—Another *Curioſity* is the wonderful *Tallow Tree*, which bears a Fruit, whoſe Kernel has all the Properties of Tallow, and of that the *Chineſe* are ſaid to make their *Candles*.

AFRICA

Longitude W^t from London
Longitude East from London
PART OF ASIA
PERSIA
ARABIA
CANARY ISLANDS
BARBARY
BILEDULGERID
BARCA
Tropic of Cancer
ZAARA OR THE DESART
CAPE VERD ISLANDS
NEGROLAND
NUBIA
ATLANTIC OCEAN
GUINEA
ABYSSINIA
ETHIOPIA
These Parts are very little known
EASTERN OR INDIAN OCEAN
Equinoctial Line
LOANGO
CONGO
MACOKO
ETHIOPIC OCEAN
SOUTH AMERICA
Ascension
St Helena
MONOMUGI
ZANGUEBAR
SOFALA
MONOMOTAPA
TERRA DE NATAL
CAFFRARIA
HOTTENTOTS
MADAGASCAR
Bourbon
Tropic of Capricorn
Meridian of London
Cape of Good Hope
AFRICA

AFRICA is the third Quarter, ſituated to the South of *Europe*, and ſurrounded on all Sides by the Sea, except a narrow Neck of Land about 60 Miles over (called the Iſthmus of *Suez*) which joins it to *Aſia*, at the Top of the *Red Sea*. This Country is about 4300 Miles *long*, and 4200 *broad*, and lies chiefly in the *Torrid Zone*; the *Equator* running through the *Middle* of it. Here once dwelt the Queen of *Sheba*, who, on paying a Viſit to the Magnificent King *Solomon*, ſtood amazed at the Wiſdom and Glories of his Court. Here we find a Race of People quite BLACK, having flat Noſes, thick Lips, and Hair like *Wool**. This *Quarter* is generally *divided* as under.

	Nations.	Length.	Breadth	Chief City.	Diſt. & Bearing from London.	Diff. of Time from London.	Religions.
Barbary.	Morocco	500	480	Fez	1080 S.	0 24 aft.	Mahometans
	Algiers	420	400	Algiers	920 S.	0 13 bef.	Mahometans
	Tunis	400	250	Tunis	990 S. E.	0 39 bef.	Mahometans
	Tripoli	700	240	Tripoli	1260 S. E.	0 56 bef.	Mahometans
	Barca	400	300	Tolemeta	1440 S. E.	1 26 bef.	Mahometans
	Egypt	600	250	Grand Cairo	1920 S. E.	2 12 bef.	Mahometans
	Bilidulgerid	2500	350	Dara	1565 S.	0 32 aft.	Pagans
	Zaara	2400	660	Tegeſſa	1840 S.	0 24 aft.	Pagans
	Negroland	2200	840	Madinga	2500 S.	0 38 aft.	Pagans
	Guinea	1800	360	Benin	2700 S.	0 20 bef.	Pagans
Up. Ethiopia.	Nubia	940	600	Nubia	2418 S. E.	2 12 bef.	Mahom. & Pag.
	Abyſſinia	900	800	Gondar	2880 S. E.	2 20 bef.	Chriſtians
	Abex	540	130	Doncala	3580 S. E.	2 36 bef.	Chriſ. & Pagans
	The *Middle Parts*, called *Lower Ethiopia*, are very little known to the Europeans.						
Lower Guinea.	Loango	410	300	Loango	3300 S.	0 44 bef.	Chriſ. & Pagans
	Congo	540	420	St. Salvador	3480 S.	1 0 bef.	Chriſ. & Pagans
	Angola	360	250	Loando	3750 S.	0 58 bef.	Chriſ. & Pagans
	Benguela	430	180	Benguela	3900 S.	0 58 bef.	Pagans
	Mataman	450	240	No Towns	* * *	* * *	Pagans
	Ajan	900	300	Brava	3702 S. E.	2 40 bef.	Pagans
	Zanguebar	1400	350	Melinda or Mozambique	4440 S. E.	2 38 bef.	Pagans
	Monomotapa	960	660	Monomotapa	4500 S.	1 18 bef.	Pagans
	Monemugi	900	660	Chicova	4260 S.	1 44 bef.	Pagans
	Sofola	480	300	Sofola	4600 S. E.	2 18 bef.	Pagans
	Terra de Nat.	600	350	No Towns	* * *	* * *	Pagans
	Caffaria or Hottentots	780	660	Cape of Good Hope	5200 S.	1 4 bef.	Moſt ſtupid Pagans.

* Some Writers have ſuppoſed theſe People to be the Deſcendants of *Cain*; who for his Cruelty to his Brother, has that Mark ſet upon him.—Others have eſteemed them to be a *different Species* of Beings, and therefore ranked them a *Link Lower* than us in the *Chain* of Exiſtence:—whilſt many have attributed that *duſky Hue* to the *Nature* of their *Diet*, and intenſe *Heat* of the Country.

Along the *Coaſts* of the *Mediterranean*, in *Egypt*, *Bilidulgerid*, and *Zaara*, the People are of a *tawney* Complexion, and dreſs like the Turks; but in all *other Parts* of this Quarter, the Inhabitants are BLACK. The better Sort of *Negroes* wear thin Veſts and white Caps, but the Poor go almoſt NAKED, having only a ſmall Piece of Skin, or coarſe Stuff wrapped about their Waiſt. The poor *Hottentots*, daubed over with *Greaſe* and *Soot*, and having their *Arms*, *Legs*, and *Neck* wrapped round with the *raw Guts* of Beaſts, make a moſt deſpicable and *naſty* Appearance.

Through *Barbary*, *Nubia*, and *Egypt*, the COMMODITIES are *Rice*, *Figs*, *Raiſins*, *Oranges*, *Lemons*, *Citrons*, *Almonds*, *Pomegranates*, *Olives*, *Senna*, *Dates*, *Leathers*, *Civit*, *Sugar*, and *Indigo*.—In *Negroland* and *Guinea*,—*Oſtriches Feathers*, *Gold-Duſt*, *Elephants-Teeth*, *Pepper*, and *Slaves*, which are chiefly purchaſed by the *Engliſh*, and tranſported to America.—The *Inland* Countries are ſaid to be full of *Lions*, *Tygers*, *Monkeys*, *Rhinoceroſes*, and *Crocodiles*: The Natives are little known. To the *South*, along the Coaſt, the Traffick is *Ambergreaſe*, *Muſk*, *Civit*, *Lemons*, *Millet*, *Pearls*, *Gold-Duſt*, &c. chiefly carried on by the *Dutch* and *Portugueſe*; the former of which have a large Settlement at the *Cape of Good Hope*, and the *latter* many on the *Eaſtern* and *Weſtern* Sides of the Continent.

The ISLANDS of this Quarter are, *Madagaſcar*, the largeſt; the Inhabitants *black*, *wild*, *ſavage*, *naked*, and under no particular Governor. The Iſlands of *Cape Verde*, 10 in Number. St. *Vincent*, St. *Nicholas*, *Lucia*, *Antonia*, *Sal*, *Bonaviſta*, *Jago*, *Mayo*, *Bravo*, and *Fuego*, all ſubject to the *Portugueze*.—The *Canary* Iſlands, 14 in Number, the chief, *Teneriff*, *Ferro*, and *Canary*, belong to the Crown of *Spain*.—The *Madeira*, noted for *excellent Wine*, ſubject to the *Portugueze*.—The *Guinea Iſles*, as *Princes*, *Po*, *Annabon*, *Thomas*, *Matthew*, &c. belong to the *Portugueze*. And the Iſles *Aſcention* and St. *Hellen*, belong to the *Engliſh*.

The principal MOUNTAINS here are, the *Lybian* Mount, between *Zaara* and *Egypt*;—Mount *Atlas*, between *Barbary* and *Bilidulgerid*, which gives Name to the neighbouring Ocean, called the *Atlantic* Ocean.—The Mountains of *the Moon* in *Ethiopia*, near the Empire of *Monemugi*.—And the *Pico* or *Peak* in *Teneriff*, one of the *Canary Iſles*, in Form of a Sugar Loaf, ſuppoſed to be the higheſt in the World, and may be ſeen 40 *Leagues* diſtant.

The moſt noted RIVERS here are, the *Nile* in *Nubia* and *Egypt*:—The *Niger* running through all *Negroland*:—The *Gambia* and *Senegal*, on which the *Engliſh* and *French* have ſome Settlements, are only Branches of the *Niger*.

The principal CURIOSITIES in Africa are, the vaſt *Pyramids* in Egypt, three Miles Weſt of *Cairo*, ſuppoſed to be built by the Children of Iſrael, when in Bondage, for Sepulchres for the Egyptian Kings.—Alſo, the *Mummy Pits* near the Pyramids, in which are found the Bodies of People, embalmed and buried 3000 Years ago, yet perfect and diſtinct at this Day.

AMERICA.

AMERIC
Longitude West from London
Arctic Circle
NEW NORTH WALES
HUDSON BAY
NEW SOUTH WALES
LABRADOR OR NEW BRITAIN
CANADA OR NEW FRANCE
PARTS UNKNOWN
NEW ALBION
GRANADA OR NEW MEXICO
LOUISIANA
CAROLINA
GEORGIA
FLORIDA
GULF OF MEXICO
CUBA
HISPANIOLA
JAMAICA
CARIBEAN SEA
BAHAMA ISLANDS
Bermudas
Tropic of Cancer
NEW SPAIN
Mexico
Acapulco
Campechy
GREAT SOUTH SEA
ATLANTIC OR WESTERN OCEAN
CARIBBEES
Windward Islands
Martinico
Barbadoes
Tobago
Trinidad
Caracas
TERRA FIRMA
Azores

AMERICA is the laſt Quarter of the World: It lies about 2300 Miles Weſt of *England*,* and is of vaſt Extent. Bounded on the *North* by unknown Parts, by the Atlantic Ocean on the *Eaſt*, by the great South Sea on the *South* and *Weſt*. 'Tis 8 or 9 thouſand Miles in *Length*, and about 3 thouſand in *Breadth*. It was diſcovered firſt by *Chriſtopher Columbus*, with a *Spaniſh* Fleet, in *October* 1492, but more fully by *Americus Veſputius* in 1497, and from him takes its Name.—It is often called the *Weſt Indies*, in Contradiſtinction to the farther Parts of *Aſia*, ſtiled the *Eaſt Indies*, diſcovered by the *Portugueſe* a little before; both which Countries were unknown to the *Europeans* till that Time. *Nature* ſeems to have divided it into *two* Parts, *North* and *South*, by a narrow Neck of Land, called the Iſthmus of *Darien*, or *Panama*, which in ſome Places is not more than 30 Miles over*.

NORTH AMERICA is divided into theſe following Parts.

Nations.	Length.	Breadth.	Chief City.	Dif. & Bearing from London.	Diff. of Time from London.	Belongs to
Mexico, or New Spain	2000	600	Mexico	4900 N. W.	6 50 aft	Spain
Granada, or New Mexico	Bounds undetermined.		St. Fee	4320 N. W.	7 0 aft.	Spain
California	Bounds undetermined.		St. Juan			Spain
Florida Eaſt and Weſt.	480	360	St. Auguſtine	3960 W.	5 24 aft.	England, now ceded to Spain
Canada	1800	1260	Quebec	2760 N. W.	4 56 aft.	England
Louiſiana	1400	1000	Fort Louis	4080 N. W.	6 4 aft.	Spain
Britiſh Colonies	1383	300	Boſton	2760 W.	4 40 aft.	England, now free States.
Nova Scotia	350	250	Hallifax	2580 W.	4 13 aft.	England

The North Part of the Continent is very little known, and ſtill claimed by the *Engliſh*. The chief Places are *Rupert's Fort*, in *Eſtimaux*, or *New Britain*—Port *Nelſon* and *Churchill* in *New North Wales*—and *New Severn*, and *Albany*, in *New South Wales*.

The *Britiſh* Colonies—now the Free States of *North America*, are *New England*, containing 4 Provinces, the chief Town *Boſton*.——*New York*, the chief Town *New York*.——*New Jerſey*, the chief Town *Elizabeth Town*.——*Penſilvania*, the chief Town *Philadelphia*.——*Delaware*, chief Town *Newcaſtle*.——*Maryland*, chief Town *Baltimore*.——*Virginia*, the chief Town *James Town*.——*Carolina*, the chief Town *Charles Town*.——And *Georgia*, whoſe chief Town is the *Savannah*; making in all 13 Provinces.

* If this *Iſthmus* were cut through to make a ſafe Paſſage for Ships into the oppoſite Seas; and alſo a like Cut made acroſs the *Iſthmus* of *Suez*, at the End of the *Mediterranean*, to open a Communication with the *Red Sea*, vaſt Advantages would be derived from thence to the Trading World, and the great Voyage round the Globe would become not only much *ſhorter*, but *ſafer* than at preſent.

The

The INDIANS here are generally of a *brown* Complexion; the few that are *white*, ſtain themſelves of a *copper* or *red* Colour, and ſome with Streakes of *blue*. They are dexterous with their *Bows* and *Arrows*; and very fond of adorning themſelves with Strings of *Beads* and *Shells* about their Necks, and *Rings* and *Plates* in their Ears and Noſes, and pull their *Beards* up by the Roots. They go *naked* in the Summer, but in the Winter cover themſelves with the *Skins* of Beaſts taken in hunting, which is their chief Employ. The *Mexicans* are civil and docile, the reſt ſavage and cruel; they *ſcalp* their Priſoners, and ſometimes (it is ſaid) *broil* and *eat* them. They are groſs Idolaters, and worſhip the *Sun* and *Stars*.

Note; the *Religion*, *Language*, and *Dreſs* of the ſeveral *Colonies* in *America*, are the ſame of the *European Nations* they belong to.

The COMMODITIES here are, *Cotton*, *Silk*, *Skins*, *Furs*, *Feathers*, *Cochineal*, *Logwood*, *Mahogany*, *Tobacco*, *Iron*, *Pine-Apples*, *Sugar*, and ſeveral Sorts of *Drugs*.

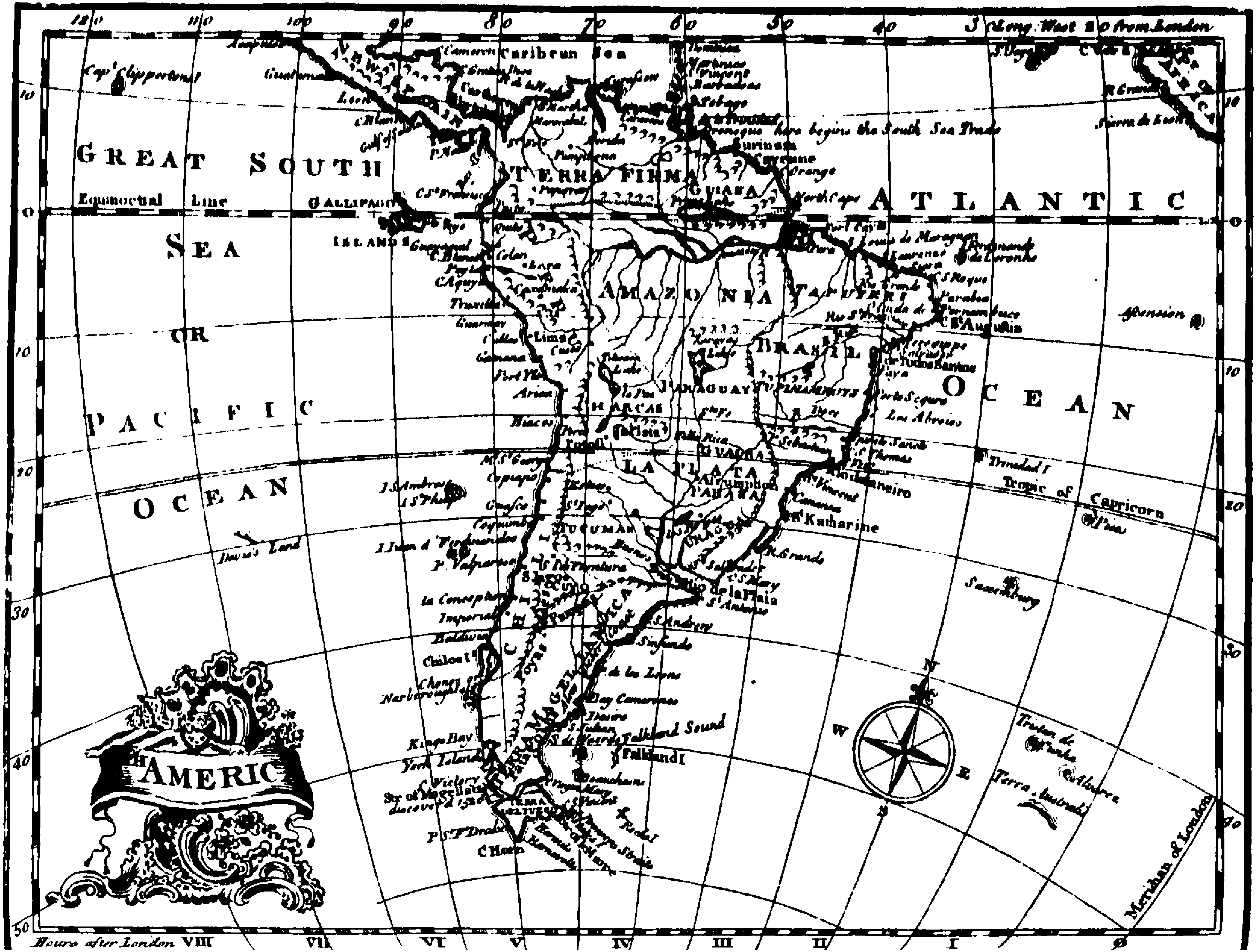
The chief ISLANDS are, *Newfoundland*, belonging to the *Engliſh*, famous for its Fiſhery.——*Bermudas* or *Summer Iſles*, are the Property of *Great Britain*.——Cape *Breton*, *Anticoſti*, and *St. John's*, belong to the *Engliſh*.——The *Babama* Iſles, (many in Number, but *Providence* only inhabited) belong to the *Engliſh*.——The *Antilles*, as *Cuba*, *Hiſpaniola*, and *Porto Rico*, belong to *Spain*, and *Jamaica* to the *Engliſh*.——The *Caribbee* Iſles, the chief *St. Chriſtophers*, *Anguila*, *Antigua*, *Barbadoes*, belong to the *Engliſh*.——*St. Martin*, *Bartholomew*, *Deſeado*, *Guadaloupe*, *Marigalante*, *Martinico*, and *Granada*, belong to the *French*.——*Euſtatia* and *Saba* belong to the Dutch, ——and *St. Thomas* to the *Danes*.——Theſe Iſlands produce vaſt Quantities of *Sugar*, (in planting of which *Thouſands* of *Negroes* are employed) *Tobacco*, *Pepper*, *Yams*, *Indigo*, *Ginger*, *Gums*, *Dying-woods*, *Cocoa*, *Cotton*, *Parrots*, *Fiſh*, *Turtles*, and *Lignum Vitæ*.

The chief MOUNTAINS here are, the *Apalachean* between Carolina and Louiſiana. But in the *North* are vaſt unknown *Mountains* perpetually covered with *Snow*, from whence the Winds blowing the greateſt Part of the Year, theſe Countries become much *colder* than thoſe in Europe in the ſame Latitude.

The moſt remarkable RIVERS are, *St. Laurence*, dividing the *Engliſh* Plantations from *Canada*.——The *Miſſiſſippi*, and the *Ohio*, in *Louiſiana*,—and the River *North* in *New Mexico*, both which laſt empty themſelves into the Gulf of Mexico.

Things moſt *curious* in this Part, are the prodigious *Falls of Water* near *Niagara*: Alſo the *Cabbage-Tree* 100 Feet high, with no Branches but at the Top.——The *Calabach*, which grows like a large Gourd, of which, cut into different Sizes, they make their *Diſhes*, *Pails*, &c.——And the *Caſſavi Root*, of which the *Indians* uſually make their *Bread*.

In


Long. West from London
Caribean Sea
Cap. Clippertons I
here begins the South Sea Trade
GREAT SOUTH SEA OR PACIFIC OCEAN
Equnoctial Line
GALLIPAGO ISLANDS
TERRA FIRMA
GUIANA
Surinam
Cayenne
Orange
North Cape
ATLANTIC OCEAN
AMAZONIA
BRASIL
PARAGUAY
CHARCAS
Lima
Arica
LA PLATA
Assumption
TUCUMAN
Rio de la Plata
St Katharine
Rio Janeiro
Tropic of Capricorn
Trinidad I
Ascension
Chiloe I
Falkland Sound
Falkland I
C Horn
Str. of Magellan
Tristan de Cunha
Terra Australis
Meridian of London
AMERIC
N
W
E
S
Hours after London VIII
VII
VI
V
IV
III
II
I

In SOUTH AMERICA are the following Nations.

Nations.	Length	Breadth	Chief City	Diſt. & Bearing from London.	Diff. of Time from London.	Belongs to
Terra Firma	1400	700	Panama	4650 W.	5 28 aft.	Spain
Peru	2000	600	Lima	5520 S. W.	5 4 aft.	Spain
Amazons, a very large Country, but little known to the Europeans, 1200 Long, 960 Broad.						
Guiana	780	480	Surinam / Cayenne	3840 S. W.	3 44 aft.	Dutch and French
Braſil	2000	700	St. Salvador	6000 S. W.	3 44 aft.	Portugal
Paraguay	1500	1100	Aſſumption	5640 S. W.	3 52 aft.	Spain & the Jeſuits
Chili	1200	600	St. Jago	6600 S. W.	5 6 aft.	Spain
Terra Magellanica, or Patagonia.	The Spaniards took Poſſeſſion of it, but did not think it worth while to ſettle there.					

The COMMODITIES of this Country are Gold, (which in *Peru* was once as plenty as Stones in the Street) *Silver*, *Pearls*, *Tobacco*, *Cochineal*, *Emeralds*, *Jaſpers*, *Amethiſts*, *Ebony*, *Cocoa Nuts*, *Pine Apples*, *Braſil Wood*, *Jeſuits Bark*, *Amber*, *Roſin*, *Balſam*, *Oſtriches Feathers*, *Maize*, and ſeveral Sorts of *Gums* and *Drugs*.

The INDIANS are generally of a good Size, and well made: Down to the Tropic of *Capricorn* they are of a *Brown* or *Copper* Complexion, but farther on tolerably fair. They have little Idea of God, or Religion; are very ſuperſtitious, and the groſſeſt Idolaters. They have many odd Cuſtoms; go for the moſt Part *naked*, but paint themſelves of various Colours, red, blue, and yellow; many of them wear large Rings in their Ears, Chains of Shells about their Necks, and glittering Stones or Plates on their Lip and Noſes, permitting no Hair to grow upon their Chins. They uſe *Bows* and *Arrows*, ſtroll about, and live by Fiſhing and Hunting, as they do in the *Northern Parts*. Some of the Natives are ſaid to be *Cannibals*, and worſhip the *Devil*.

The ISLANDS here are, *St. Catherines* and *Trinidad*, off the Coaſt of *Braſil*—*Chiloe* and *Juan Fernandes*, near *Chili*,—and the large Iſland *Terra del Fuego*, (ſo called on Account of its terrible *Volcanoes* or burning Mountains) at the South of *Magellanica*; theſe all belong to *Spain*.—But *Falkland* Iſland is claimed by the *Engliſh*.—There are many more *Iſlands* ſcattered about the Great South Sea, but all are thinly inhabited, and of no great Account.

The chief MOUNTAINS are, *St. Martha* in *Terra Firma*:—The *Andees*, which are ſaid to be the higheſt in the World:—Their Tops are always covered with Snow; and the Cold is ſo intenſe, that Numbers have periſhed in attempting to go over them; and others have loſt their Fingers and Toes, and been lamed for ever. No Beaſt of any Kind is found upon them. They run through the whole Length of *South America*.

The moſt remarkable RIVERS are, *Oronoko*, in *Terra Firma*, where the South Sea Trade begins;—the vaſt River *Amazon* in *Amazonia*, and *Rio de la Plata*, or the River *Plate*, in *Paraguay*.

Of the leſs-known PARTS of the WORLD.

IN the *North*, near the Pole, are, *Nova Zembla*, an Iſland—*Greenland* or *Spitſburgen*, an Iſland—and *Groenland*, on the *Continent*. The Inhabitants very few, and thoſe ſavage, low in Stature, and of a diſagreeable Look, ſomething reſembling a Bear. They live upon the Fleſh of *Whales*, *Bears*, *Foxes*, *Rain-Deers*, and go muffled up in Skins, the hairy Side next their Bodies. The *Sun* does not appear in theſe Parts for 3 or 4 Months together in the Winter, and then the *Cold* is ſometimes ſo intenſe as to *freeze Brandy*. And in the Summer, he ſhines as many Months continually upon them, which makes the *Heat* as troubleſome. Here alſo lie—*New Britain*—*New North Wales*—*New Denmark*, &c. in *America*—and *Yeſdo*, *Kamchatka*, and a few ſmall Iſlands adjoining, in *Aſia*, all very little known.

Near the *Molucca Iſles* in *Aſia* are, *New Britain*, *New Ireland*, and *Louiſſade*; and under them, the large Iſland *New Holland*, almoſt as big as *Europe*. The Inhabitants very few, black, and quite naked.

A little further Eaſtward is *New Zealand*, conſiſting of two Iſlands, almoſt as large as Great Britain. The Northern one is very proper for the Reception of a New Colony from this Country: The Inhabitants here are but few, and nearly our *Antipodes*.

Within the *Tropics*, to the North of New Zealand, we meet with the New *Hebrides*, many conſiderable Iſlands.—Further on towards America are the *Friendly Iſlands*, many but ſmall ones.——Beyond theſe, are the *Society Iſles*, 7 or 8 in Number; the Chief *Otahite*, about 90 Miles in Circumference.——Above theſe are the *Marqueſas* or *Quiros*, 5 in Number, all ſmall ones;—and beyond, about half-way to America, is *Eaſter Iſland*, very ſmall, and Inhabitants few.

Above the *Society Iſlands*, near the Tropic of Cancer, are the *Sandwich Iſles*, in Number 11; the largeſt *Owyhee*, where Capt. *Cook*, who lately diſcovered them, was unfortunately killed by the wild Inhabitants.

When, and by what Means theſe ſeveral Iſlands became inhabited, is not eaſy to determine: But one Thing is pretty certain, that the Inhabitants ſeem all to be derived from the ſame Source, as the ſame Language, and nearly the ſame Cuſtoms prevail at all of them. The Inhabitants are generally very brown; and cover ſome Part of their Bodies with a Sort of Matting made with the Bark of Trees. Their *Edge-Tools* are made of a hard Kind of Stone; and they are very fond of marking their Bodies and Faces in Variety of Shapes with *black* inſerted into the Skin, which is called *Tattowing*. The only Animals found among all theſe Iſlands are *Dogs*, *Hogs*, and *Rats*, which, beſides Fiſh and Roots, are the cuſtomary Food of the Inhabitants.

If there be any conſiderable Track of Land about the *South Pole*, it is ſo wholly ſurrounded with Fields and Mountains of Ice, that it is impoſſible to arrive at it. It is therefore very reaſonable to believe that there can be no Inhabitants beyond thoſe Parts of the Globe already diſcovered.

Of

Of the TRADE WINDS.

I Cannot conclude without obſerving the wonderful *Phænomenon* of the *Trade Winds*; I mean ſuch Winds as always blow from one and the ſame Quarter of the Globe. They are repreſented in the Maps by the *Shades* in, and about the *Torrid Zone*, and their *Direction* is conſtantly the Way the little *Arrows* ſeem directed. In the *Ethiopic*, *Atlantic* and *Pacific* Oceans (to 30 Degrees from the *Equinoctial* Line) they are continually found to blow towards the *Weſt*; but in the Bay of *Bengal*, *Arabian*, *Chineſe*, and *Indian* Seas, the Winds *vary*, blowing one Half of the Year *one* Way, and the other the *contrary*; i. e. in the *Summer* they blow to the N. E. but in the *Winter* to the S. W. Theſe are called the *periodical* Trade Winds, and by the Sailors *Monſoons**. As the *Arrows* point their *Courſe*, ſo the Times of ſhifting are denoted by the *Months* thereto annexed. All *Ships* which trade in theſe Parts are obliged to obſerve the wonted Seaſons; by *that* Means, they never fail of a *fair Wind* to waft them to the wiſh'd-for Port, and another to return them *to the Haven where they would be*.

* At the *Changing* or Breaking up of the *Monſoons*, which happens about *March* and *September*, there are dreadful Storms of *Wind*, *Thunder*, and *Rain*; which, agitating the *Atmoſphere* to great Diſtances, are perhaps the *Cauſe* why theſe Months are ſo *Windy* in *this Part* of the World.—From 30 Degrees towards the Poles, the Winds are *variable*, though they blow from the *Weſt* oftener than any other Point.

Of the CHANGES that have happened to the SURFACE of the EARTH.

THE former Deſcription of the Earth is a true Figure of its Surface at this Day; but it has not always been the ſame from its firſt Formation, as is evident from ancient Accounts. For, we find that *large Tracts of Land* in ſome Places have been ſunk down by *Earthquakes*, *Volcanos*, &c. into the Sea, and become great Lakes of Water; and, in other Places, where was only Water, Lands have riſen from the Bottom of the Sea, and carried up their Productions of *Vegetables*, *Fiſh*, and *Shells*, and are now cultivated as common Lands. Other Changes alſo have happened through *Inundations*, *great Rains*, *meltings of Snow*, and the *Rapidity of Rivers*, carrying down with them much Earth and Sand, which ſettling on the ſhallow *Sea Shores*, have extended the Limits of thoſe Shores further into the Sea. Thus, Places, which once ſtood on the very Shores, have after many Ages been found ſtanding at a great Diſtance from the Sea; and the intermediate Space, which was once Sea, is become cultivated Ground. Again, the Sea, by its conſtant Motion, and by the Violence with which it is forced by the Winds againſt ſome Lands, hath by Degrees waſhed the Parts away, and the Sea by that Means hath now reached Places, which formerly ſtood a conſiderable Diſtance from the Shore. Theſe Alterations and Changes of the Earth's Surface are continually, tho' ſlowly, taking Place. Hence ſome Countries are found to be increaſing, whilſt others are diminiſhing their Dimenſions.

THE

THE

EXPLANATION and USE

OF THE

MAPS.

THE Map of the WORLD at the Beginning of the Book, repreſents the Globe, taken out of its Horizon, ſqueezed flat, cut through, and turned up again. The Hemiſphere on the Right Hand contains *Europe*, *Aſia*, and *Africa*; that on the Left, *North* and *South America*. The Circles bounding the Projection repreſent the Braſs Meridian. The Top and Bottom are the *North* and *South Poles*; and the *Curve Lines* uniting there, are the other *Meridians* upon the Globe. The *Equator* is the Strait Line running acroſs the Meridians exactly in the Middle. The *Tropics* and *Polar* Circles are delineated at their proper Diſtances on each Side towards the North and South; and the *Ecliptic* is the *Serpentine Line*, one Half of which bends upwards from the Equator to the Tropic of Cancer, and the other Half downwards to the Tropic of Capricorn. If you turn your Eye to the Map, you will find all the *Lines*, and the ſeveral *Countries*, deſcribed in their proper Diſtances and Situation, juſt as upon the Globe itſelf; and which View will give you a better *Idea* than all the verbal Deſcriptions in the World.

The other Maps, *viz.* of *Europe*, *Aſia*, *Africa*, and of *North* and *South America*, which are bordered with a *Square*, are only Parts of a larger Projection, in order to exhibit each particular Country, and its contiguous States more *diſtinctly*. The Top is always the *North*; the Bottom the *South*; the Right Hand *Eaſt*; the Left Hand *Weſt*; when 'tis otherwiſe, there is always a *Compaſs* annexed to point the Contrary. The Lines running from Top to Bottom are *Part* of the *Meridians*; and thoſe from Side to Side are *Parallels* of *Latitude*, which are generally drawn 10 Degrees diſtant, or 600 Miles aſunder from each other.

Maps are uſed not only to exhibit the true *Shape* of *Countries*, but alſo, the *Longitude* and *Latitude* of Places, and their *Diſtances* and *Bearing*, or Situation from one another.

(1ſt,) To find the LATITUDE of any Place.

Look the Place; then run with a Pencil, or your Finger, to either the Right or Left-hand-ſide, keeping the ſame Diſtance between the Lines above and below it, and the Degree you meet with there, is the *Latitude* required.

Thus, the Latitude of *London* you will find to be about 51 and 1-half, and Latitude of *Dublin* 53 Degrees.

(2d,)

(2d,) To find the LONGITUDE of any Place.

Only run your Pencil or Finger from it, to the Top or Bottom of the Map, and the Degree againſt it is the Longitude required.

Thus the Longitude of *Rome* is about 13 Degrees to the Eaſt; and *Liſbon* about 9 to the Weſt.

(3rd,) The LONGITUDE and LATITUDE being given, to find the Place.

Look the Longitude at the Top or Bottom; and the Latitude on the Right or Left-Hand, then run your Fingers acroſs the Map till theſe two Lines meet, and that is the exact Situation of the Place.

Note; By this Method any Town may be inſerted, when the Longitude and Latitude of it are known, and the Place is not in the Map already.

(4th,) To find the Difference in TIME between us in *England*, and any other Place; and conſequently to know *what o'Clock* it is at any Place in the World.

Having looked the Place; only bring your Finger down to the Bottom of the Map, and there you will find the Difference either before or after us, the Time being figured on the Maps.

Thus at *Conſtantinople*, the Reſidence of the Great Turk, it is always 2 Hours before us; but at *Jamaica* in the *Weſt-Indies*, the Time is 5 Hours after us.

(5th,) To meaſure the DISTANCE and POSITION of one Town from another.

If the Places lie under the ſame Meridian, only count the Number of Degrees between them; theſe multiplied by 60, gives the *Diſtance* required.—But if the Places lie in any other Direction, then with a Pair of *Dividers*, open from one to the other; apply this Opening to the Meridian, which runs equally between them, (remembering to place the Legs equally above and below the Parallels, which run through thoſe Places) then count the Degrees on the Side of the Map, between the two Points of the *Dividers*, which Degrees, multiplied by 60, will give the *Diſtance*, as before.

The little *Compaſs* you find inſerted will ſhew how the Places *bear* from each other.

Thus the Diſtance from *London* to *Vienna* in *Germany* is about 11 Degrees or 660 Miles almoſt Eaſt; and to *Dublin* in *Ireland* is about 4¼ Degrees or 255 Miles North Weſt.

(6th,) To find what Nations and People *riſe*, *dine*, *ſup*, and *go to bed*, at the ſame Time with one another.

Look into the Map of the World, (at the Beginning of the Book) and obſerve thoſe Nations, which lie near or under the *ſame Meridian*; for the Inhabitants of thoſe ſeveral Countries are employed in the ſame Offices of Life at the ſame Time.

Thus you ſee the *Scotch*, *French*, *Spaniſh*, *Moors*, and *Negroes*, as they are under the ſame Meridian with the *Engliſh*, muſt, conſequently, *riſe*, *dine*, *ſup*, and *go to bed*, when we do here.

The Difference of the MILES in ſeveral Countries is very *great*; but it will be uſeful to remember, That

The *Engliſh*, *Italian*, and *Turkiſh*, are nearly the ſame, viz. each 1760 Yards.
The *Scotch* and *Iriſh* Mile is about 1 ½ *Engliſh*.
The *German*, *Daniſh*, *Dutch*, and *Poliſh*, is about 4 *Engliſh*.
The *Swediſh* is about 5 *Engliſh*.
The *Spaniſh* is about 3 ½ *Engliſh*.
The *Hungarian* and *Daniſh* is about 6 *Engliſh*.
The *Ruſſian* is about ¾ *Engliſh*.
The *Arabian* is about 1 ¼ *Engliſh*.
The *Perſian*, *Arabian*, and *Egyptian*, is about 3 *Engliſh*.
The *Indian* is almoſt 3 *Engliſh*.
The *Japan* is about *half a Quarter* of an *Engliſh* Mile.
The *French League* is 2 of our own Miles.
The *Engliſh League* is 3 of our own Miles.

Note; If the whole LAND be ſuppoſed to be divided into 100 Parts,

Europe, Aſia, Africa, America } will be about { 12, 27, 26, 35 } of thoſe Parts.

Note alſo; the RELIGIONS in the World are four.—*Paganiſm*—*Judaiſm*—*Chriſtianity*—and *Mahometaniſm*.—Among the Profeſſors of each of theſe Religions, we find ſome little Differences and Diſtinctions taking Place in the Mode of their Worſhip.

If we ſuppoſe all the INHABITANTS on the Earth to be divided into 30 equal Parts,

The Pagans, The Jews, The Chriſtians, The Mahometans } will be about { 18, 1, 5, 6 } of thoſe Parts.

The Number of *Inhabitants* computed at preſent to be in the *known World* at a *Medium*, taken from the beſt Calculations, are about 953 *Millions*.

Europe contains	——	153
Aſia ——	——	500
Africa ——	——	150
America ——	——	150
		Millions
	Total	953 Millions.

Some Writers make the Number of Perſons on the Earth to be about 1000 Millions; and ſuppoſe a Generation to laſt 33 Years; then the above Number muſt die off in that Time. Conſequently the Number of Deaths in one Year will be 30 Millions;—in one Day 82 Thouſand;—in one Hour 3 Thouſand 4 Hundred;—in one Minute Sixty;—in one Second One. On the other Hand, it having been found, that the Number of *Deaths* is to the *Births* as 10 to 12 nearly; it follows, that the Births in 1 Year are 36 Millions;—in 1 Day 98 Thouſand,—in 1 Hour 4080;—in 1 Minute 72;—in 1 Second 1 ⅕.

If the Human Race had been immortal, that is, if none had died off, there would be at this Time upon the Globe 173,000,000,000 Perſons living.

THE

A

DESCRIPTION

OF

Commodore ANSON's Voyage round the WORLD.

THE *Engliſh* foreſeeing a *War* would unavoidably happen with *Spain*, the *Government* came to a Reſolution of ſending a *Squadron* of Ships into the *South Seas* to make Repriſals on the Spaniards in that Part of the World. Accordingly *Commodore Anſon*, having received Orders for that *Expedition*, ſet ſail in the *Centurion*, with *ſix* or *ſeven* Ships more from *Portſmouth*, the 8th of *September* 1740; but meeting with contrary Winds, did not arrive ſo far as *Madeira* till 40 Days after; *viz. October* 25.—This is a ſmall Iſland belonging to the *Portugueze*, and is famous for its excellent *Wine**.

On the 3d of *November* he left the *Madeiras* bound for St. *Catherine's*, a ſmall Iſland on the Coaſt of *Braſil* in *South America*, where (by the Benefit of the *Trade Winds*, after croſſing the *Equinoctial Line* the 28th of *November*) he came ſafe to an Anchor on the 18th of *December*.

Staying here to refreſh the *Crew*, and refit his *Ships*, till the 18th of *January*, he ſet ſail, and purſued his Voyage to the *Bay* of *St. Julian*, on the Coaſt of *Magellanica*, where he anchored the 1ſt of *February*.—This is a *large*, *wild*, and *deſolate* Country, claimed by the *Spaniards*, but they have made no Settlements in it. The *Natives* are repreſented as *Giants*.

The Commodore weighed Anchor at *St. Julian* the 27th of *February*, propoſing to attack *Baldivia*, a principal Port of the *Spaniards*, on the oppoſite Side of the Continent in *Chili*; but meeting with dreadful Storms, which ſeparated his *Fleet* in paſſing round *Cape Horn*, he was obliged to ſteer directly for *Juan Fernandes*, an uninhabited Iſland about 110 Leagues from the Coaſt of *Chili*; where he did not arrive till the 9th of *June*, 1741.—This *Iſland* abounds in beautiful *Lawns*, fine *Paſturages*, &c. and is the Property of *Spain*.

Having continued here upwards of three Months with a View of recovering his Men, who were moſt of them ill with the *Scurvy*, as well as for the ſeparated Ships to rejoin him; on the 19th of *September* he left *Juan Fernandes*; and after taking ſeveral ſmall Prizes on the Coaſt of *Chili*, arrived at *Paita*, a large Sea-port in *Peru* near the *Equinoctial*, which he *took*, *plundered*, and *burnt*.

* In the Map at the Beginning of the Book is delineated the Tract which Commodore Anſon's Ship took in ſailing round the World.

From hence, the *Squadron* ſailed away on the 16th of *November*, and reached the Iſland *Quibo*, near *Panama*, on the 3rd of *December*: And, having taken in *Wood* and *Water*, left it the 9th of *December*. The next Day he took a ſmall Prize, and then ſailed for the Coaſt of *Mexico*, to cruiſe off the Port of *Accapulco*, in Hopes of taking a rich *Galleon*, belonging to the *Spaniards*, which uſually ſails early in the Spring from thence to *Manilla*, one of the *Philippian Iſles* in *Aſia*.

The Governor of *Accapulco* getting Intelligence of the *Engliſh* being upon their Coaſt, deferred the ſailing of that Ship till the Year following: On which Diſappointment, the Commodore ſteered away to *Chequetan*, a Port farther *North*; and having taken in freſh *Water*, &c. departed from the Coaſt of *Mexico* the 6th of *May* 1742 for *China*. But meeting with great Diſtreſſes in his long Voyage over the vaſt *Pacific Ocean*, was obliged to get to the firſt Land. On the 27th of *Auguſt* they made the *Ladrone Iſles*, and in a Day or two more got into *Tinian*, one of the moſt pleaſant; which, though uninhabited, was found full of *Cattle*, *Fruits*, and *Game*. Theſe *Iſles* belong to *Spain*.

Here Mr. *Anſon* met with Diſtreſſes greater than any he had encountered before: For, on the 22d of *September*, a violent *Storm* of *Wind* ariſing, his Ship was driven from its *Anchor*, and forced to Sea, leaving himſelf and the greater Part of his Men on Shore; who concluded that the Ship would be inevitably loſt, and all on Board periſh. But whilſt they were contriving a Method to eſcape if poſſible, the Ship, to their inexpreſſible Joy, returned on the 11th of *October*, after having been abſent 19 Days, and all the Hands in the greateſt Diſtreſs.——The Commodore having recovered his Ship, and ſufficiently refreſhed his Men, departed from *Tinian* the 21ſt of *October*; and paſſing between the Iſlands *Formoſa* and *Lucoria*, made the Coaſt of *China* the 5th of *November*; and on the 12th anchored at the little Iſland *Macao*, belonging to the *Portugueſe*, near *Canton*.

Mr. *Anſon* having *here new-rigged* his Ship and got in freſh Stores, weighed Anchor the 19th of *April* 1743, and ſtood to Sea; where he ſoon came to a Reſolution of ſteering back and cruiſing off the *Philippian Iſles* for the *Manilla* Ship, which was to have ſailed from *Accapulco* to theſe Parts the Year before. Where plying till the 1ſt of *July*, the *Colours* of the long expected Ship appeared in View; which they ſoon came up with, and, after a ſmart Engagement, took. The Commodore returned with his Prize to *Canton*, and on the 11th of *July* came to an Anchor off *Macao* again.—— This *Ship* and *Cargo* proved to be worth almoſt a *Million* of Money.

Having finiſhed his Affairs at *Canton*, and ſold his *Prize*, the Commodore ſet ſail the 15th of *December*, and on the 3d of *January* came to an Anchor in the Streights of *Sunda*; where he continued to take in *Wood* and *Water*, till the 8th, then ſtanding for the *Cape of Good Hope*, the moſt Southern Part of *Africa*, anchored in *Table Bay* the 11th of *March*. The Settlements here belong to the *Dutch*.

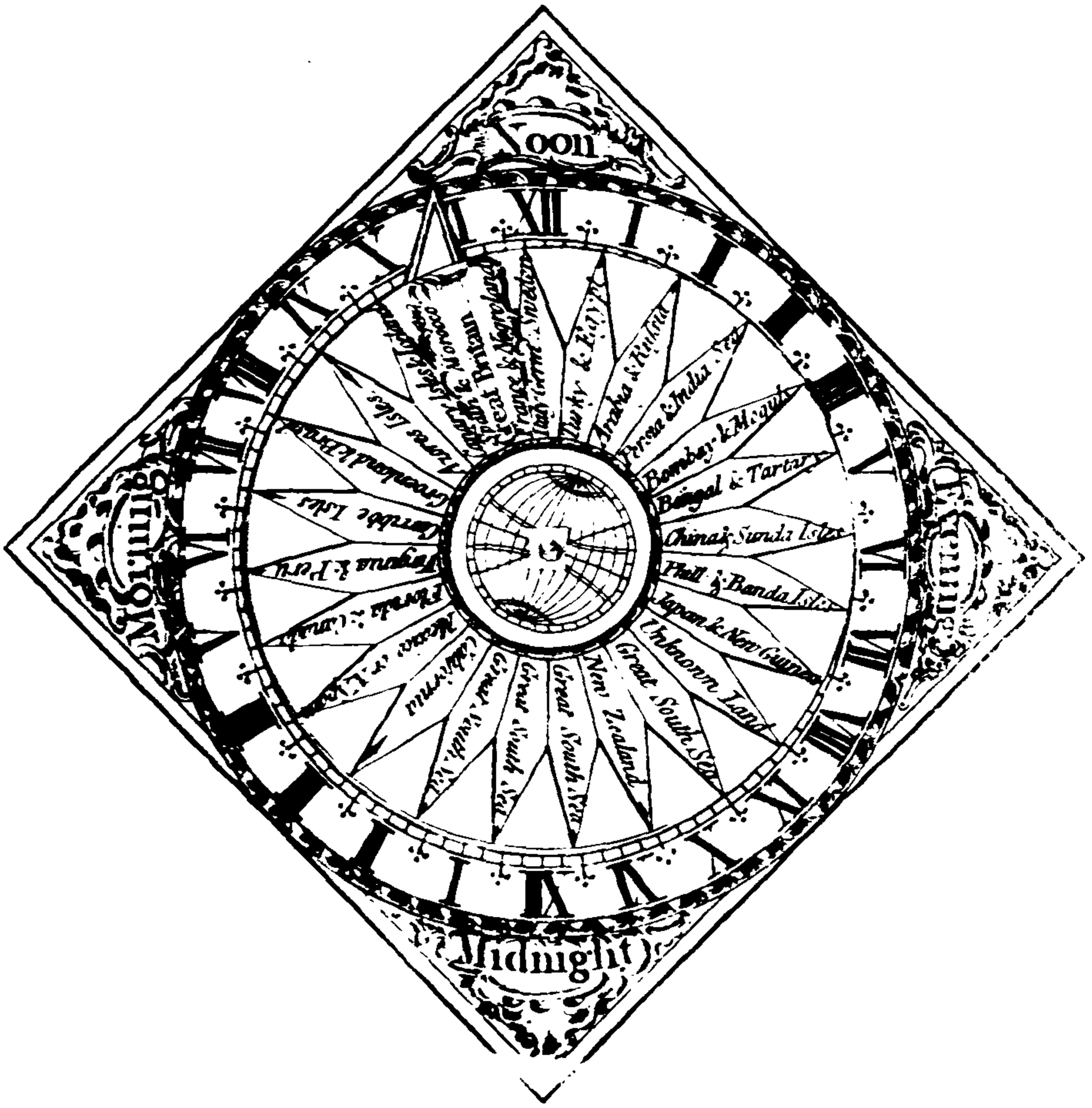
On the 3rd of *April* 1744, his Buſineſs being compleated at the *Cape*, he put to *Sea* again. On the 19th was in Sight of the Iſland *St. Helens*, but did not touch there. The 10th of *June* he ſpoke with an *Engliſh* Ship bound to *Philadelphia*, which gave him Intelligence of a *War* with *France*. This greatly alarmed him; but bearing up with his uſual *Intrepidity*, he ſteered clear of the *French Fleet*, which was then at Sea, and on the 15th of the ſame Month arrived ſafe to an *Anchor* at *Portſmouth*, to the great *Joy* of the whole *Crew*, as well as their Friends; after an Abſence of almoſt four Years,—and having *loſt one Day* in his *Reckoning*.*

* This is eaſy to be accounted for: For, if a Man travel the ſame Way with the *Sun*, he will lengthen his Day a little; i. e. he will find it to be ſomething longer than it would have been, had he ſtaid at the Place he came from. This ſmall Addition being made to each Day of his *Tour* round the Globe, will amount in all to 1 whole Day: Conſequently he muſt reckon on his Return one Day leſs, than they do, who have continued ſtill at the ſame Place. For it is evident,—that the *Sun* muſt have gone once more by them, than by him, who journeyed round the Earth with it.——See more at Paradox 4th.

SINCE Lord Anſon's Time, ſeveral Voyages have been made round the Globe, by Engliſh Gentlemen.——*Commodore Byron*, by Order of his Majeſty, ſailed from the Downs the 21ſt of June 1764, to make Diſcoveries in the South Seas. On the Coaſt of Patagonia he converſed with that Gigantic Race of Men, about 7 Feet in Height, whoſe Exiſtence had been the Subject of much Diſpute. He paſſed through the Straits of *Magellan*, croſſed the South Sea, without making any very remarkable Diſcoveries, and anchored in the Downs again the 9th of May 1766.——*Captain Wallis* left Plymouth the 16th of Auguſt 1766, ſailed through the Magellanic Straits, and returned to the Downs the 20th of May 1768.——*Captain Carteret* ſet ſail with Captain Wallis from Plymouth, but was unfortunately ſeparated the 11th of April following. After eſcaping the moſt eminent Dangers in the Straits of Magellan, he croſſed the *South Sea*, and came to an Anchor at Spithead, the 20th of March 1769.——*Captain Cook* [his Majeſty being determined to proſecute the Diſcoveries begun in the South Seas] was appointed to the Command of the Ship named the Endeavour, with which he ſailed from Portſmouth the 26th of Auguſt 1768, and after the moſt ſatisfactory Voyage that ever was undertaken, he anchored in the Downs the 12th of June 1771. Among the New Countries diſcovered by this important Voyage, the immenſe Line of the Coaſt of *New South Wales* in Aſia, which heretofore was marked as Sea, claims the Pre-eminence. A Territory of Two Thouſand Miles Extent is hereby added to the Crown of Great Britain. And *New Zealand*, a Country nearly under us, he firſt diſcovered to be two vaſt Iſlands. *Otaheite*, and the neighbouring Iſlands in the South Seas, which he either diſcovered or touched at, are pictured in Colours, which muſt ever render them pleaſing to Europeans.——After having thrice circumnavigated the Globe, and explored the utmoſt navigable Limits of the Ocean in every Quarter, this great, but unfortunate Man, was cut off by the Savage Natives of *Owyhee*, one of the Sandwich Iſlands, January 14th, 1779.

THE EXPLANATION and USE OF THE GEOGRAPHICAL CLOCK.

THE outer Circle, which is fixed, and divided into twice XII. repreſents the 24 Hours of Day and Night: The moveable Circle within has the Capital Kingdoms and Nations of the Earth inſcribed according to their Longitude; or Difference in Time from each other. The Top is always *Noon*; the Bottom *Midnight*; the Left-hand Side is *Morning*; the Right-hand *Evening*; as the Figure itſelf points out. Some of the many Uſes of this little *Machine* are as under.



Bring *Great Britain* to the Hour on the outer Circle, that it is by your Watch; then againſt the ſeveral Countries inſerted in the moveable Circle, you have the Time of *Day* or *Night* at thoſe Places at one View.

Thus

Thus, when it is 10 in the *Morning* with us in *Britain*—it is almoſt 10 at the Courts of *Spain* and *Morocco*;—a little *paſt* 10 at *France* and *Negroland*;—about 11 through *Italy*, *Germany*, and *Sweden*.——*Noon* at the Reſidence of the *Great Turk*, and with the *Egyptians*, &c.——3 in the *Afternoon* at our Settlements at *Bombay* and the *Moguls*;—5 at *China*;—10 at *Night* at *New Zealand*, which are nearly our *Antipodes*.——*Midnight* to thoſe ſailing in the *Great South Sea*;——3 in the *Morning* at *Mexico* or *New Spain*;——5 at *Virginia* and *Peru*;—7 at *Groenland* and the *Braſils*;—and 9 at the *Canary Iſles* and *Iceland*.

Hence alſo, at one View, you may ſee at every Hour of the Day how the whole World is engaged, and what the ſeveral Inhabitants are ſuppoſed to be employed in.——You may ſee where they are *Riſing*;—where *Breakfaſting*;—*Dining*;—*Drinking Tea*;——where going to *Supper*, or *Aſſemblies*;——and where to *Bed**.

* This is grounded upon a Suppoſition, that 5 or 6 o'Clock in the Morning may be taken for the Time of *Riſing*;—9 for *Breakfaſting*;—12 and 1 for *Dining*;—5 for *Drinking Tea*;—8 for *Supping*;—and 10 for *going to Bed*.

The Different MANNER by which *ſome Nations and People* reckon TIME.

THE *Babelonians*, *Perſians*, and *Syrians*, and ſome Part of *Germany*, acount the 24 Hours of the natural Day to begin at *Sun-riſing*.

The (ancient) *Jews*, *Athenians*, and *Italians*, reckon from *Sun-ſetting*.

The *Egyptians*, like the *Engliſh*, &c. begin at *Midnight*.

The *Aſtronomers* and *Seamen* begin the Day at Noon, and reckon on 24 Hours to the next Day at Noon.—And according to this Mode of reckoning are all the Calculations of the *Sun*, *Moon*, and *Planets* made and inſerted in the common Almanacks.

THE

THE

DESCRIPTION and USE

OF THE

TERRESTRIAL GLOBE.

THE *Terreſtrial Globe* is an artificial *Sphere* or round *Ball*, upon whoſe Surface are exactly delineated the chief *Kingdoms*, *Nations*, and *Cities* on the Earth, in their proper *Situations* and *Diſtances*, juſt as they are in *Nature*.

This curious *Inſtrument* conſiſts of ſeveral Parts.

(1.) The 2 *Poles* (being the Ends of the Axis, on which the Globe turns to perform the Diurnal Motions) repreſenting thoſe of the World: The Upper is the *North Pole*, and the Lower the *South Pole*.

(2.) The *Braſs Meridian* divided into 4 Quarters, and each Quarter into 90 Degrees: The upper Part is graduated from the Equator towards the Poles; but the lower Part from the Poles towards the Equator. This Circle ſurrounds the Globe, and is conjoined to it at the Poles themſelves.

(3.) The *Wooden Horizon* or *Frame*, which ſupports the whole Globe; the upper Part of it repreſents our *true Horizon*, and has ſeveral Circles drawn upon it.——The firſt, next the Globe, contains the 12 *Signs* of the *Zodiac*, through which the Sun or Earth revolves in a Year; theſe are ſubdivided into ſingle Degrees.——The next Circle exhibits the *Julian*, and the third the *Gregorian* Kalendar (or *Old* Stile and *New* Stile) divided into *Months* and *Days*.——On the outſide of theſe are generally delineated the 32 *Points* of the *Compaſs*.

(4.) The *Hour Circle*, divided into twice 12 Hours, fitted to the Meridian round the North Pole. The upper 12 repreſents Noon; the lower 12, Midnight. Upon the Pole is fixed a little *Index*, uſeful, as it turns round, to point the Hour of Day or Night.

(5.) A thin Slip of Braſs called a *Quadrant of Altitude*, divided into 90 Degrees, the ſame Size with thoſe on the Equinoctial; this is to be faſtened occaſionally to the *Top* of the Meridian, in order to meaſure the *Diſtances* and *Directions* of Places from each other.

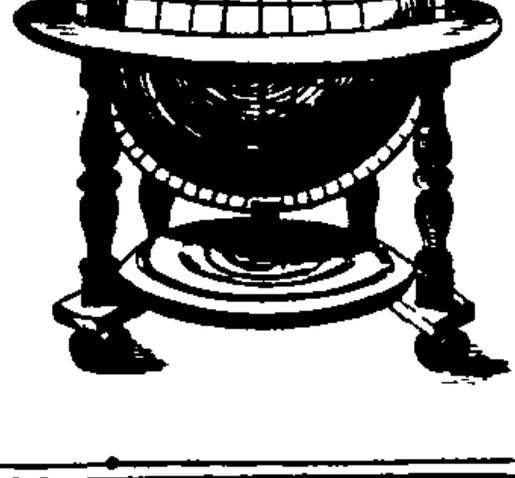
The Terrestrial GLOBE

E'er half the SCHOOL *Authors be Read, it will be seasonable for* YOUTH *to learn the Use of the* GLOBES.

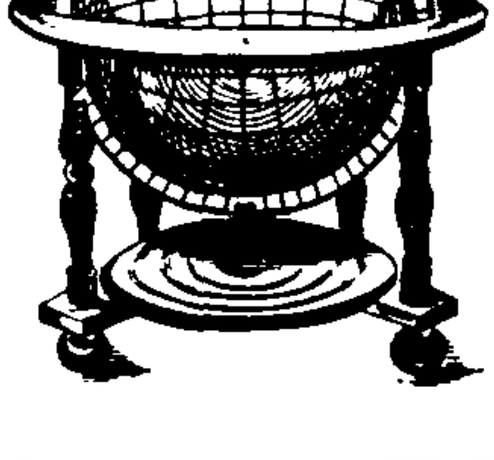
Milton on Education.

The GLOBE *or Sphere in its Three Different* Positions.

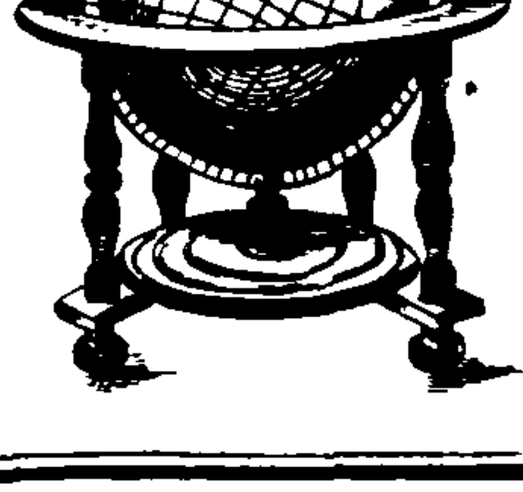
Parallel Sphere.



Direct Sphere.



Oblique Sphere.



T.K.Powell Sculp.

(Laſtly,) On the *Surface* of the Globe are alſo delineated the *Equinoctial* Line divided into 180 Degrees each Way from the firſt, or chief Meridian: ——The *Ecliptic* * divided into the 12 Signs, and each Sign into 30 Degrees;——the *Tropics* of Cancer and Capricorn;——the 2 *Polar* Circles; ——and the 24 *Meridians*, correſponding to the 24 Hours of the Day and Night.

The USE of this curious *Mathematical* Inſtrument, is to point out the various *Phænomena* belonging to the different *Nations* and *Inhabitants* of the World, with Reference to their *Diſtance*, *Poſition*, *Varieties of Days* and *Nights*, *Changes* and *Revolutions* of the *Seaſons*, in an eaſy and natural Manner; without the Trouble of long and tedious Calculations.

* The *Ecliptic Line* repreſents that Path in the Heavens, which the Sun ſeems to deſcribe by the Earth's yearly Revolution round it. It is divided into 12 equal Parts, and each of thoſe into 30 more, correſponding to the 12 Months and the Days of the Months. The *Names* and *Characters* of the 12 Signs, with the Time of the *Sun's Entrance* into each, is as follows.

Aries	*Taurus*	*Gemini*	*Cancer*	*Leo*	*Virgo*	*Libra*	*Scorpio*	*Sagittarius*	*Capricornus*	*Aquarius*	*Piſces.*
♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
Mar. 20.	Apr. 20.	May 21.	June 22.	July 23.	Aug. 23.	Sept. 23.	Oct. 24.	Nov. 22.	Dec. 22.	Jan. 20.	Feb. 19.

The *Globe* is an Inſtrument ſo exceedingly uſeful and entertaining, that no Gentleman who ſtudies *Hiſtory*, *Geography*, *Aſtronomy*, or *Chronology*, ſhould be without it.

The moſt USEFUL PROBLEMS are theſe, which follow.

PROBLEM I. To find the *Latitude* of any Place.

Only bring the Place to the graduated Side of the *Braſs Meridian*, and the Figure that ſtands over it ſhews its *Latitude*, or Diſtance from the Equinoctial

Degrees.
Thus the Latitude of *London* is——51 and ½ *North.*
Jeruſalem is——32 —— *North.*
and the *Cape of Good Hope*——34 and ½ *South.*

Note, If a Place lies on the North Side of the Equinoctial Line, it has *North Latitude*; but if on the South Side, it has *South Latitude*.

Note, The Latitude of a Place can never be more than 90 Degrees either *North* or *South*,—that being the greateſt Diſtance of the Poles (on each Side the Globe) from the Equinoctial Line.

PROBLEM II. To find the *Longitude* of any Place.

Bring the Place to the *Braſs Meridian*; then obſerve the Degree the Meridian cuts on the Equinoctial, and that is its *Longitude*, or Diſtance in Degrees either *Eaſtward* or *Weſtward*, from the *firſt Meridian*; which, in ſome Globes, begins at *Ferro*, in others at *Teneriff*, but on the new ones, at *London*.

Degrees.
Thus the Longitude of *Mecca* in *Arabia* is——43 ½ *Eaſt* } from *London.*
And the Longitude of *Port Royal* in *Jamaica* is 77 *Weſt* }

Note, The *Longitude* of a Place can never be more than 180 Degrees either *Eaſt* or *Weſt*: Becauſe that Diſtance brings you to the oppoſite Part of the Meridian, which is the fartheſt any Place can poſſibly be from us.

PROBLEM III. To *rectify* the Globe, (i. e.) to place it in ſuch a particular Situation as is neceſſary for the Solution of many of the following Problems.

Having turned the graduated Side of the Meridian towards you, move it higher or lower till the Pole ſtands as many Degrees above the Horizon as the Latitude of the Place is, you would rectify for. Thus, if the Place be *London*, you muſt raiſe the Pole 51 ½ Degrees, (becauſe that is the Latitude of it) which brings that City to the Top or Zenith of the Globe, and over the Center of the Horizon; then turn the *North Pole* of the Inſtrument to the North Part of the World, which may be done by Means of a little Compaſs, and the Globe will repreſent the natural Situation of the Earth itſelf ——

Note, In all Problems relating to *North Latitude*, you muſt elevate the *North Pole*; but in thoſe that have *South Latitude*, you muſt raiſe the *South Pole*.——

The *North Pole* muſt always incline to that Part of the Horizon marked *June*; and the *South Pole* to that marked *December*.

PROBLEM

* Note: The Globe, with Reſpect to the Horizon, may be placed in *three* different *Poſitions*, whence come the Diſtinctions of a *Right*, *Oblique*, and *Parallel Sphere*, as repreſented in the Plate of the Globe.

The

PROBLEM IV. The *Longitude* and *Latitude* of a Place being given, to find it upon the Globe.

Only bring the Degree of *Longitude* found on the Equator to the Meridian: then under the Degree of *Latitude* is the Place required.

Thus, ſuppoſe an *Engliſh Privateer* falls in with a *French Ship* in 36 Degrees 20 Minutes *North Latitude*, and 32 Degrees *Longitude Weſt* from *London*; you will find it to be in the Middle of the vaſt *Atlantic Ocean*, a little South of the *Azore Iſles*.

PROBLEM V. To find the *Sun's Place* in the Ecliptic.

Look the Day of the Month in the outer Calendar upon the Horizon, (if the Globe was made before the Alteration of the Stile) and oppoſite to it, you will find the *Sign* and *Degree* the Sun is in that Day.—Thus on the 25th of *March*, the Sun's Place is 4 ½ Degrees in *Aries*.—Then look for that Sign and Degree upon the *Ecliptic Line* marked on the Globe, and there fix on a ſmall black Patch, ſo is it prepared for the Solution of the following Problems.

Note; The *Earth's* Place is always in the Sign and Degree *oppoſite* the *Sun*; thus when the Sun is 4 ½ Degrees in *Aries*, the Earth is 4 ½ Degrees in *Libra*; and ſo of any other.

PROBLEM VI. To find the Sun's *Declination*, that is, his Diſtance from the Equinoctial Line either *Northward* or *Southward*.

Bring his Place to the Edge of the Meridian; obſerve what Degree of the Meridian lies over it, and that is his Declination.—If the Sun is on the *North Side* the Line, he is ſaid to have *North Declination*; but if on the *South Side*, he has *South Declination*.

Thus on the 20th of *April* the Sun has 11 ½ Degrees *North Declination*, but on the 26th of *October*, he has 12 ½ *South Declination*.

Note; The greateſt Declination can never be more than 23 ½ Degrees either *North* or *South*.—That being the greateſt Diſtance of the *Tropics* from the Equinoctial, and beyond which the Sun never goes.

The *Sphere* is *Direct* or *Right* when the Poles of the World are in the Horizon, and the Equator paſſes through the Zenith. People, who live in this Sphere, are ſaid to live under the Line, (as they do in many Places in *Africa*, *Eaſt-Indies*, and *America*) their Days and Nights are always equal; the Sun is over their Heads twice a Year; and all the Stars in both Hemiſpheres are viſible in different Parts of the Year.——A *Parallel Sphere* has the Poles of the World in the Zenith, and the Equator in the Horizon. In this Poſition, one Half of the Ecliptic is above the Horizon, and the other Half below it.—Conſequently, thoſe who live at the Poles, (if any ſuch) have one Half of the Year Day, the other Half Night; with a Twilight, that continues about two Months. They never ſee but one Half of the Heavens, which is continually revolving round them.——An *Oblique Sphere* is that, which has the Poles of the World inclined between the *Horizon* and *Zenith*. In this Situation all the Circles on the Globe are cut unequally by the Horizon, except the Equator. All the People in the World, except thoſe who inhabit at the Equator and the Poles, have this Poſition. The Days and Nights are always *unequal*, unleſs at the Times of the Equinoxes in *March* and *September*. The Increaſe of this Inequality, as well as of the Twilight, becomes more ſenſible the nearer they approach the Poles.——The Height of the Pole above the Horizon (in Degrees) is ever equal to the Latitude of that Place, or Diſtance of it from the Equinoctial.

PROBLEM VII. To find where the Sun is *Vertical* on any Day:—That is, to find over whoſe *Heads* the Sun will paſs that Day.

Bring the Sun's Place to the Meridian, obſerve his Declination, or hold a Pen or Wire over it, then turn the Globe round, and all thoſe Countries which paſs under the Wire will have the Sun over their Heads that Day at *Noon*.

Thus on the 16th of *April* the Inhabitants of the North Parts of *Terra Firma*, *Porto Bello*, *Philippian Iſles*, Southern Parts of *India*, *Abyſſinia*, *Ethiopia*, and *Guinea*, have the Sun over their *Heads* that Day at 12 *o'Clock*.

Note, This *Appearance* can only happen to thoſe who live under the *Torrid Zone*, becauſe the Sun never *ſtrays* farther from the Equinoctial, either Northward or Southward, than to the two Tropicks from whence he returns again.

PROBLEM VIII. To find over whoſe Heads the Sun is at any *given Hour*.

Bring the Place where you are (ſuppoſe at *London*) to the Meridian; ſet the Index to the given Hour by your Watch, then turn the Globe till the Index points to the upper 12, or *Noon*, look under the Degree of Declination for that Day, and that is the Place to which the Sun is Vertical, or over its Head at that Time.

Thus on the 13th of *May*, a little paſt 5 in the Afternoon at *London*, I find the Sun is then over the *Heads* of thoſe who live at *Port Royal* in *Jamaica* in the *Weſt Indies*.

Note; If it be Morning, the Globe muſt be turned from Eaſt to Weſt: If in the Afternoon, it muſt be turned from Weſt to Eaſt.

PROBLEM IX. To find, at any Hour of the Day, what *o'Clock* it is at any Place in the World.

Bring the Place where you are to the Braſs Meridian; ſet the Index to the Hour by your Watch, turn the Globe till the Place you are looking for comes under the Meridian, and the Index will point out the Time there required.

Thus when it is 6 o'Clock in the Evening at *England*—'tis half an Hour *paſt* 8 at Night at *Jeruſalem*.—Almoſt *Midnight* at the Palace of the *Great Moguls*.—2 in the *Morning* at *Pekin*.—7 in the Middle of the *Great South Sea*; and *Noon* at *Florida*, *Canada*, and the *Iſthmus* of *Panama*.

Note; By this Problem you may likewiſe ſee, at one View, in diſtant Countries, where the Inhabitants are *Riſing*—where *Breakfaſting*—*Dining*—*Drinking Tea*; where going to *Aſſemblies*,—and *where to Bed*.

The Sun's *Longitude*, *Right* and *Oblique Aſcenſion*, *Azimuth*, &c. are conſidered and explained in the Uſe of the *Celeſtial Globe*, annexed to my *New Syſtem of Modern Aſtronomy*.

PROBLEM X. To find at what Hour the Sun *rises* and *sets* any Day in the Year; and alſo upon what Point of the *Compaſs*.

Rectify the Globe for the Latitude of the Place you are in; bring the Sun's Place to the Meridian, and ſet the Index to 12; then turn the Sun's Place to the *Eaſtern* Edge of the Horizon, and the Index will point out the Hour of *riſing*; if you bring it to the *Weſtern* Edge of the Horizon, the Index will ſhew the *ſetting*.

Thus on the 16th Day of *March*, the Sun roſe a little paſt 6, and ſet a little before 6.

Note; In the Summer the Sun riſes and ſets a little to the *Northward* of the Eaſt and Weſt Points, but in Winter, a little to the *Southward* of them. If therefore, when the Sun's Place is brought to the Eaſtern and Weſtern Edges of the Horizon, you look on the inner Circle right againſt the little Patch, you will ſee the *Point of the Compaſs* upon which the Sun riſes and ſets that Day.

PROBLEM XI. To find the *Length* of the *Day* and *Night* at any Time of the Year.

Only *double* the Time of the Sun's *riſing* that Day, and it gives the Length of the *Night*; *double* the Time of his *ſetting*, and it gives the Length of the *Day*.

This Problem ſhews how long the Sun ſtays with us any Day, and how long he is abſent from us any Night.

Thus on the 26th of *May* the Sun riſes about 4 and ſets about 8; therefore the *Day* is 16 Hours long; and the *Night* 8.

PROBLEM XII. To find the Length of the *longeſt or ſhorteſt Day* at any Place upon the Earth.

Rectify the Globe for that Place, bring the Beginning of *Cancer* to the Meridian; ſet the Index to 12, then bring the ſame Degree of *Cancer* to the *Eaſt* Part of the Horizon, and the *Index* will ſhew the Time of the Sun's *Riſing*.

If the ſame Degree be brought to the *Weſtern* Side, the Index will ſhew the *Setting*, which *doubled* (as in the laſt Problem) will give the Length of the *longeſt Day* and *ſhorteſt Night*.

If we bring the Beginning of *Capricorn* to the Meridian, and proceed in all reſpects as before, we ſhall have the Length of the *longeſt Night* and *ſhorteſt Day*.

Thus in the great *Mogul's Dominions*, the *longeſt Day* is 14 Hours; and the ſhorteſt Night 10 Hours. The *ſhorteſt Day* is 10 Hours, and the *longeſt Night* 14 Hours.

At *Peterſburgh*, the Seat of the Empreſs of *Ruſſia*, the longeſt Day is about 19 ½ Hours, and the ſhorteſt Night 4 ½ Hours. Shorteſt Day 4 ½ Hours, and longeſt Night 19 ½ Hours.

Note; In all Places near the *Equator*—the Sun riſes and ſets at 6 the Year round.——From thence to the *Polar Circles*, the Days increaſe as the Latitude increaſes; ſo that at thoſe Circles themſelves, the longeſt Day is 24 Hours, and the longeſt Night juſt the ſame.——From the *Polar Circles* to the *Poles*, the Days continue to lengthen into Weeks and Months; ſo that at the very Pole, the Sun ſhines for 6 Months together in *Summer*, and is abſent from it 6 Months in *Winter*.——*Note*; That when it is Summer with the Northern Inhabitants, 'tis Winter with the Southern, and the contrary; and every Part of the World partakes of an equal Share of Light and Darkneſs.

PROBLEM XIII. To find all thoſe Inhabitants to whom the Sun is this Moment *riſing* or *ſetting* in their *Meridian* or *Midnight*.

Find the Sun's Place in the Ecliptic, and raiſe the Pole as much above the Horizon as the Sun (that Day) declines from the Equator; then bring the Place where the Sun is Vertical at that Hour to the Braſs Meridian; ſo will it then be in the *Zenith* or Center of the Horizon. Now ſee what Countries lie on the *Weſtern* Edge of the Horizon; for in them the Sun is *riſing*;—to thoſe on the *Eaſtern* Side he is *ſetting*;—to thoſe under the *upper* Part of the Meridian 'tis *Noon Day*:—and to thoſe under the *lower* Part of it, it is *Midnight*.

Thus on the 25th of *April* at 6 o'Clock in the Evening at *Worceſter*,

The Sun is *riſing* at { *New Zeland*; and to thoſe who are ſailing in the Middle of the *Great South Sea*.

The Sun is *ſetting* at { *Sweden*, *Hungary*, *Italy*, *Tunis*, in the Middle of *Negroland* and *Guinea*.

In the *Meridian* (or *Noon*) at { the Middle of *Mexico*; Bay of *Honduras*, Middle of *Florida*, *Canada*, &c.

Midnight at — { the Middle of *Tartary*, *Bengal*, *India*, and the *Seas* near the *Sunda Iſles*.

PROBLEM XIV. To find the Beginning and End of *Twilight*.

The *Twilight* is that faint Light, which opens the Morning by little and little in the Eaſt, before the Sun riſes; and gradually ſhuts in the Evening in the Weſt, after the Sun is ſet. It ariſes from the Sun's illuminating the upper Part of the *Atmoſphere*, and *begins* always when he approaches within 18 *Degrees* of the Eaſtern Part of the Horizon, and *ends* when he deſcends 18 *Degrees* below the Weſtern; when dark Night commences, and continues till Day breaks again.

To find the *Beginning of Twilight*—Rectify the Globe: Turn the Degree of the *Ecliptic*, which is oppoſite to the Sun's Place, till it is elevated 18 Degrees in the *Quadrant of Altitude* above the Horizon on the *Weſt*, ſo will the Index point the Hour Twilight *begins*.

To find when it *ends*—Bring the ſame Degree of the Ecliptic to 18 Degrees of the Quadrant on the Eaſt Side, and the Index will point the Time Twilight *ends*.

Thus on *May* 16 at *London*, Twilight begins a little after 1 in the Morning; and ends a little before 11 at Night.——In theſe Parts we have no total Night, but a conſtant Twilight from the 20th of *May* to the 20th of *July* following, which is about 2 Months.——

Note; The Reaſon we uſe the Place oppoſite the Sun in this Problem, and raiſe it *above* the Horizon, is, becauſe the Quadrant of Altitude is not long enough, nor graduated to 18 Degrees below the Horizon.

PROBLEM XV. To meaſure the *Diſtance* from one Town to another.

Only take their Diſtance with a Pair of Dividers, and apply it to the Equinoctial, that will give the Number of Degrees between them, which being multiplied by 60, (the Number of *Geographical* or *computed Miles* in one Degree) gives the exact Diſtance ſought:——Or, extend the Quadrant of Altitude from one Place to the other, that will ſhew the Number of Degrees in like Manner, which may be reduced to Miles as before.

Thus the Diſtance from *London* to *Madrid* is 11 $\frac{1}{2}$ Degrees. From *Paris* to *Conſtantinople* 19 $\frac{1}{2}$ Degrees. From *Briſtol* to *Boſton* in *New England* 45 Deg.

which multiplied by 60

gives computed Miles 2700

Note; No Place can be further from another than 180 Degrees—that being half the Circumference of the Globe, and conſequently the greateſt Diſtance.

PROBLEM XVI. To find the *Poſition*, or upon what *Point of the Compaſs* one Town or Country bears from another.

Rectify the Globe to the Latitude of one of the Places, and bring it to the Meridian; then extend the Quadrant of Altitude (it being fixed over that Place) to the other, and the End will point upon the Horizon the Poſition, and thereby ſhew in what Part of the World it lies directly from the other.

Thus, ſuppoſe it was required to know the Poſition of *Rome* from *London*.——The Globe being rectified, *London* brought to the Meridian, and the Edge of the Quadrant of Altitude laid to *Rome*, you will find the End fall againſt that Part of the Horizon marked S. E. At the ſame Time you will ſee, (as in the laſt Problem) that the Diſtance is about 13 Degrees, or 780 Miles. So that a *Bomb* thrown from hence, 780 Miles upon the *South Eaſt Point*, would fall exactly at *Rome*, and put the Inhabitants there in great Conſternation.

PROBLEM

PROBLEM XVII. To find all thoſe Countries in which an *Eclipſe* of the *Sun* or *Moon* will be viſible.

1. Of *the* SUN: Find the Place to which the Sun is *vertical* at the Time of the *Eclipſe* by Problem 7th, and bring it to the *Zenith*, or Top of the Globe; then, to all thoſe Places above the Horizon, if the *Eclipſe* be *large*, will the Sun appear (Part of it) viſibly obſcured.

2. Of *the* MOON: Bring the *Antipodes* or Country oppoſite * to the Place where the Sun is *vertical* at the Time of the *Eclipſe*, to the *Zenith* or Top of the Globe, and then the *Eclipſe* will be ſeen in all Places above the Horizon at that Time.

PROBLEM XVIII. To find the *Diſtance* of any Place in whoſe *Zenith* the *Sun*, *Moon*, or any *Star* or *Comet* is at that Time.

Take the *Sun's*, *Star's*, or *Comet's* Altitude with a Quadrant in Degrees, ſubtract it from 90; the Remainder gives the Diſtance of the Sun or Comet from your own *Zenith*; which multiply by 60, the Product will give the Miles between you and the Place in whoſe Zenith the Sun or Comet is at that Time.

Thus, ſuppoſe the Height of the Sun on any Day is about 37 Degrees; then 37 ſubtracted from 90, leaves 53 for its Diſtance from you; which multiply by 60, gives 3180; and ſo many computed Miles it is to the Place over which the Sun is at that Time.——*Note*; The Sun itſelf will point the Way to it.

PROBLEM XIX. To calculate the *Circumference of the Earth* (that is) to find how many Miles it is *round*.

A Line going round our Globe, is ſuppoſed by Mathematicians to be divided into 360 equal Parts, called Degrees; and each of thoſe Parts are ſuppoſed to be divided into 60 other equal Parts, called Minutes. Now our Countryman, Mr. *Norwood*, found by accurately meaſuring from *London* to *York* in 1635, that one Degree upon the Earth's Surface contained 69 $\frac{1}{2}$ *Statute Miles*; conſequently if the whole 360 Degrees be multiplied by 69 $\frac{1}{2}$ or 70, which is near enough, we ſhall find the Circuit of the whole Earth, in meaſured Miles, to be 25,200.

Note; 60 computed Miles make a Degree, which makes the Circumference to be but 21,600 Miles.

* *Note*; The Reaſon for bringing the *Place oppoſite* the Sun to the Top of the Globe is, becauſe the Moon is always in that Poſition when ſhe is *eclipſed*.

PRO-

PROBLEM XX. To calculate the *Diameter* of the Earth, (i. e.) to find how many Miles it is *through*.

It has been found by accurate Menſuration, that if a Circle meaſures 22 round, its Diameter will be exactly 7: i. e. the Diameter is always a little leſs than one-third Part of the Circumference; and this always holds true, be the Circle bigger or leſs.——Therefore if we multiply the Circumference of the Earth by 7, and divide the Product by 22, the Quotient will give the *Diameter*, or Thickneſs; and which, in this Caſe, will be found to be 8018 *meaſured*, 6872 *computed* Miles.*

* *Note*, From theſe Dimenſions of the Earth we may diſcover that——

(1ſt.) If there were a Hole made through it, and a *Millſtone* let fall into this Hole, and ſhould deſcend at the Rate of 1 Mile *per Minute*, it will be more than 2 ¾ Days in coming to the Center; and being there, would remain ſuſpended.

(2d.) If a *Man* be deſirous of travelling round the Earth, and ſhould go 20 Miles each Day, he would be 3 Years and ½ in completing the Journey.

(3d.) If a *Bird* ſhould fly round the Earth in 2 Days, ſhe muſt go at the Rate of 525 (meaſured) Miles an Hour.

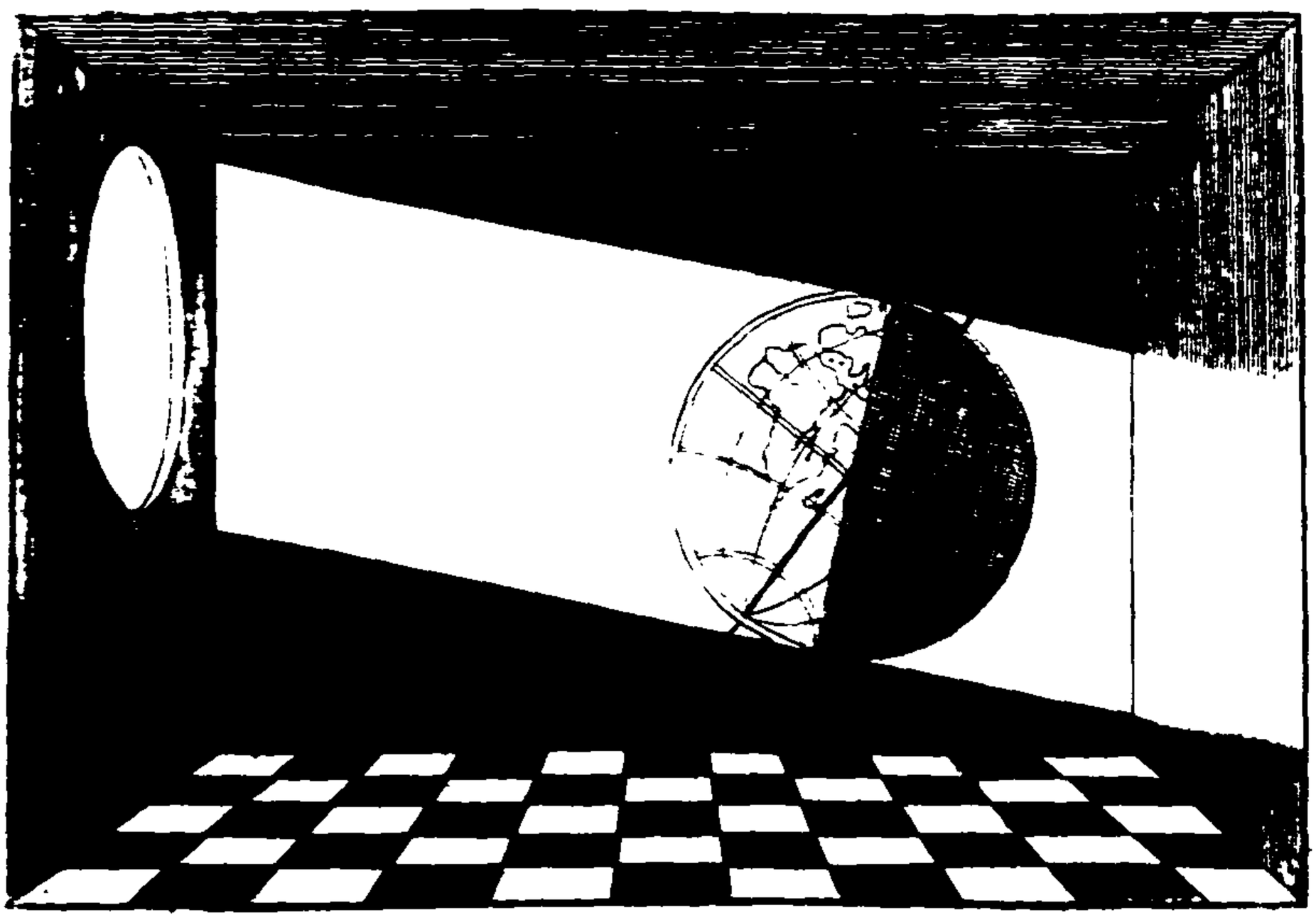
Note alſo, That by the rapid Motion of the Earth round its *Axis*, the Inhabitants at the *Equator* are carried more than 1000 Miles an Hour, and thoſe at *London* upwards of 580, excluſive of the 58 Thouſand Miles ariſing from its *Hourly Motion* in its Orbit round the Sun.

EXPERIMENTS

UPON THE

GLOBE in a DARKENED ROOM.

TAKE the Globe out of its *Horizon*, and tie a ſtrong Thread to the Braſs-Meridian at the Latitude of the Place you are in: By this Thread hang it to the Top of the Room, ſo as the Sun may ſhine through a Hole made in the Window-ſhutter freely upon it. Then directing the Poles of the Globe to their reſpective Poles in the Heavens; ſtay it faſt with another Thread, that it cannot go from that Poſition. This done, bring the Place you are in to the Edge of the Meridian; ſo will the Globe be *rectified*,—and will correſpond in all Reſpects with the *Earth* itſelf, and *that Part* of it you *live upon*.



The Globe being thus *ſuſpended* in a Room, (made *dark* every where but at the Hole through which the *Sun Beams* enter, as exhibited in the above Figure) you may with Pleaſure obſerve the following curious *Phænomena*, or Appearances; which will give you a clearer Idea of many Concluſions in *Geography* than any Deſcriptions whatever.

PHÆ-

PHÆNOMENON I. You will ſee how this *artificial* Earth, like the *natural*, will have *one* Hemiſphere illuminated by the *Sun*, and the *other* involved in *Shade*.——You will ſee, at that Moment, where it is *Day*, and where it is *Night*.—'Tis *Day* in all the Countries within the *Sunſhine*, and *Night* in the Nations *behind*, they being hid in *Obſcurity* and *Shade*.

PHÆNOMENON II. If, in the *Middle* of the *enlightened Hemiſphere*, you ſet up a *Pin perpendicularly*, it will project *no Shadow*, which ſhews that the *Sun* is juſt in the *Zenith* of that Place; (that is) *directly over the Heads of the Inhabitants there*.——And, if many *Pins* be ſtuck up in different Parts of the Globe, they will caſt their *Shadows* exactly the ſame Way as the *Inhabitants* of thoſe Places do. Some you will ſee pointing towards the *North*, ſome to the *South*; ſome ſtretching Eaſtward, others *Weſtward*; and ſome again projecting no *Shadow* at all.

PHÆNOMENON III. If you draw a *Meridian Line*, with a Pencil, from one Pole to the other, through the *Middle* of the *Illuminated Hemiſphere*, —then in all Places under that Line it is *Noon*; in thoſe Places ſituate on the *Weſt* Side, it is *Morning*, for with them the *Sun* is ſeen aſcending in the Eaſt; and in thoſe Places ſituate on the *Eaſt* Side, it is *Evening*, for with them, the Sun is ſeen deſcending to the *Weſt*.

PHÆNOMENON IV. The *Globe* ſtill remaining in the *ſame Poſition*, you may ſee on the *Eaſt Side* in what *Nations* the *Sun* is ſtealing away, and drawing the duſky *Curtain* of *Night* after it; and on the *Weſtern Side* of the Globe, you may obſerve the *Sun* creeping upon it, driving the *Darkneſs* before him, and bleſſing the *benighted Inhabitants* with the *Glories* of the coming *Day*.

PHÆNOMENON V. So many *Degrees* as the Light ſpreads beyond either the *North* or *South Pole*, juſt ſo many Degrees is the *Declination* of the Sun either *Northward* or *Southward* at that Time: And in all thoſe Places comprehended in a Circle deſcribed at the Termination of the *Sunſhine* about the Pole, it is *continual Day* till the Sun *decreaſes* in its *Declination*; for the *Sun* goes not below their Horizon, as you may eaſily perceive, by turning the *Globe* gently upon its *Axis*: And at the *oppoſite* Pole, to the ſame Diſtance round it, it will continue to be *Night* (the *Sun* not reaching thither) till it *decreaſes* in its *Declination*; for in this Situation it cannot aſcend above, or be ſeen in their *Horizon*.

PHÆNOMENON VI. The *Globe* remaining in the *ſame Situation* till the *Evening*; you may, if the *Moon* ſhines, ſee what *Nations* are *illuminated* by the Moon at that Time, and where ſhe is *riſing* and *ſetting*:—You will alſo ſee the various Projections of the *Shadows* of the ſeveral *Inhabitants* over the *Globe*, and to which of the Poles ſhe does not *ſet* that Night.

PHÆ-

PHENOMENON VII. If you take a *narrow Strip* of *Paper*, equal in Length to the *Circumference* of the Globe, and divide it into 24 equal Parts, to repreſent the 24 Hours of the *Day* and *Night*, marking it in Order from 1, 2, 3, to 12; and then beginning again 1, 2, 3, to 12, as before; you may, by *girthing* the *Globe* round upon the *Equinoctial*, (provided you take Care to place one of the 6's exactly under the Meridian of your Habitation) have a continual *Sun-Dial*, which will always point out the *Hour* of the *Day* at two different Parts, viz. where the *illuminated Hemiſphere* is divided from the *ſhaded*, both on the *Eaſtern* and *Weſtern* Sides of the *Globe*.

GEOGRAPHICAL PARADOXES.

Before we *conclude* this Subject on the *Globe*, it will not, I flatter myſelf, be diſagreeable to entertain the Reader with a few *peculiar Properties* relative to it; and which, though at *firſt*, may ſeem to carry an Air of *Falſhood* or *Abſurdity* with them, to thoſe who have not been accuſtomed to Enquiries of this Sort, yet, upon a *more deliberate Conſideration*, will be found to be *real Truths*, and ſuch as actually exiſt in Fact. *Propoſitions* of this Kind are generally called PARADOXES; their *Deſign* is to awake the Appetite of the *young Learner*, rouſe his Attention, and ſet him upon *thinking*.

PARADOX I. There is a *certain Place* upon the Earth, where the *Winds*, though frequently *veering round the Compaſs*, always *blow* from the *North*.

SOLUTION.——This muſt be at the *South Pole*, where there is no ſuch Thing as *Eaſt* and *Weſt*; all Winds blowing there muſt neceſſarily blow from the *North*, as all *Winds* at the *North Pole* muſt needs blow from the *South*; becauſe the *Meridians* which are *North* and *South Lines*, all unite in the *Poles* themſelves.

PARADOX II. There are *two remarkable Places* on the *Globe*, in which there is but *one Day* and *one Night* through the whole Year.

SOLUTION. The *two remarkable Places* are the *two Poles*: For to the *North Pole* the *Sun riſes* about the 20th of *March*, and ſets not till the 23d of *September*, at which Time it riſes to the *South Pole*, and continues to ſhine there till the 20th of *March* following. And becauſe it *riſes* but *once*, and *ſets* but *once* in a *Year* to either, there can be but *one Day* and *one Night* in the *whole Year*.

PARADOX III. There are *three remarkable Places* on the Globe, to whoſe *Inhabitants* all the *Stars* in *Heaven* are *viſible* on three certain Nights of the Year.

SOLUTION.——This is upon the *Equator*: When at the Beginning of the Night, you ſee one *Hemiſphere*, or *half* the *Stars*, which by the Morning ſet, and the *other Half* appear in their Room, which were hid the Evening before. Thus there are not only *three Places*, but *all* Places upon, or near, the *Line*, are favoured with this *Appearance*, which we here can *never enjoy*.

PARADOX

PARADOX IV. There is a certain Iſland in the Mediterranean Sea, on which, if *two Children* were *born* at the *ſame Inſtant*, and ſhould live ſeveral Years, and both *expire* on the *ſame Day*, the *Life* of the *one* would *exceed* the *Life* of the *other* ſeveral Months.

SOLUTION.——If *one* of the Perſons ſail *Eaſt*, the *other Weſt*, round the *Globe*, which is now eaſily done in a Year, they will *differ two Days* in their Reckoning, the *one* having *got* a Day, the *other loſt* one; ſo that in 40 Years the one will ſeem to be 80 Days older in his Reckoning than the other, when in fact the Life of one is not an Hour more than the other.—Others ſolve this Paradox, by ſuppoſing one of the Perſons to go and reſide within one of the *Polar Circles* (as at Latitude 73 Degrees) where the Day is 3 Months long; and then return back to the other, who lives in a Part of the World, where the Day never exceeds 24 Hours; in this Caſe, though *both die* at the *ſame Inſtant*, the *one* will be *three Months* older than the *other*.

PARADOX V. There are *two Places* in *Aſia* that lie under the *ſame* Meridian, and at a *ſmall Diſtance* from each other, and yet the reſpective Inhabitants, in reckoning their Time, *differ* an *entire Day* every Week.

SOLUTION.——This ſeems to be the Caſe of the *Portugueze* and *Spaniards* in the *Eaſt-Indies*. The *Spaniards* ſailing thither *Weſterly*, *loſt half a Day*; the *Portugueze* ſailing *Eaſterly*, *gained half a Day*; the one having a Settlement in *China*, the other in the *Philippian Iſles*, near the ſame Meridian, it muſt of courſe be *Saturday* with the one when it is *Sunday* with the other.

PARADOX VI. *Three certain Men* went a *Journey*, in which, though their *Heads* travelled *twelve Yards* farther than their *Feet*, yet all returned *alive*, and with their *Heads on*.

SOLUTION.——If any Perſon ſhould travel round the *Globe*, the Space gone over by his *Head* will exceed that of his *Feet*, by the *Circumference* of a Circle, whoſe *Semi-Diameter* is the Man's own *Height*.——Now ſuppoſe *Drake*, *Cavendiſh*, or *Anſon*, who went round the Globe, were each of them near 2 Yards high; then will the *Diameter* of the Circle be 4 Yards, and the *Circumference* ſomething more than 12 Yards; and ſo much farther did the *Heads* of theſe Gentlemen go than their *Feet*.

*** Something like this happens to a *Horſe* in a *Mill*. The *off Side* goes *ſix Times* the Thickneſs of the *Horſe* farther than the *Side next* the Center, in each Revolution, yet the *near Side* does not ſeem to travel *faſter*, nor is the *off Side* left behind.

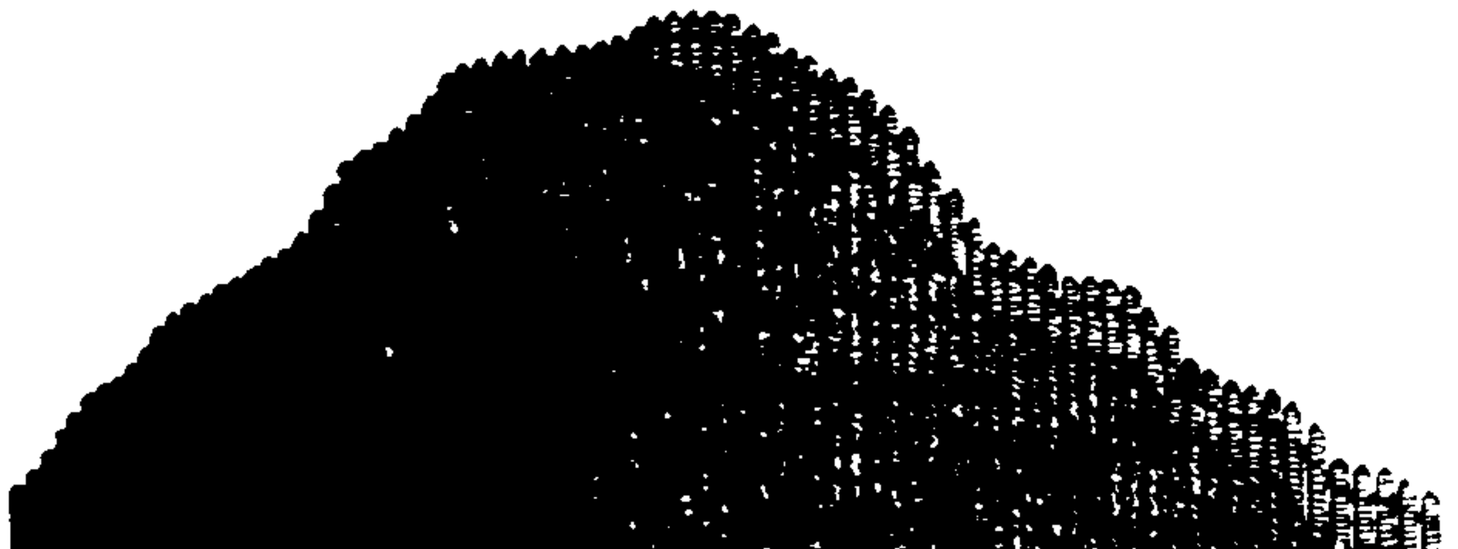
PARADOX VII. There are *two Places*, often viſited by the *Engliſh*, whoſe Difference of *Longitude* is 10 Degrees, and Diſtance 600 Miles: And there are alſo *two other Places* uſually frequented, whoſe Difference of *Longitude* is the ſame (i. e. 10 Degrees) yet their *real* Diſtance from each other is not much more than 60 *Miles*.

SOLUTION.——At the *Equator* every Degree of *Longitude* is equal to a Degree of *Latitude*, which is 60 Miles; ſo that two Places, 10 Degrees diſtant there, are 600 Miles aſunder. But in the *Icy Sea* near the North of *Greenland*, where the *Whale Fiſhery* is carried on, a Degree of *Longitude* is but about 10 Miles (the Meridians approaching much nearer than at the Equator) conſequently two Places, which are 10 Degrees diſtant there, will not be more than 100 Miles aſunder.

PARADOX VIII. There are *three* diſtinct Places on the *Earth*, all differing in *Longitude* and *Latitude*, and diſtant from each other 2000 Miles completely, yet they all bear upon one and the ſame Point of the *Compaſs*.

SOLUTION.——All Places, though different in *Longitude* and *Latitude*, and at what Diſtance ſoever, with Reſpect to either *Pole*, bear upon the *ſame Point* of the *Compaſs*. For, to an Eye at the *North Pole*, all Places bear to the *South*; and at the *South Pole*, all Places bear to the *North*: Becauſe, all the Points of the *Compaſs* (like the *Meridians*) unite there.

PARADOX IX. There are ſeveral *Mountains* in *England* and *Wales* of a prodigious Height, yet of ſuch Nature and Situation, that were they to be paled acroſs, they would take no more to complete that Boundary than would be found neceſſary to pale only acroſs the *Baſe*, if the Mountain was removed.



SOLUTION.——This is *true* of all *Hills* whatever: For, as all *Paling* is ſet *perpendicular*, there muſt be juſt the ſame Quantity as if it ſtood upon the *Baſe*. This is clear from a Sight of the *Figure*, in which you ſee the *Pales* upon the *Aſcent* and *Deſcent* of the Hill, transferred by Dots to the *Baſe* or *Ground-Line*, where the *Number* and *Diſtances* are *equal* in both Caſes.

†+† Hence it is manifeſt, that no *Hill*, (though it has a larger Surface than level Ground) will bear more *Trees*, or *Grain*, than the *Surface* would do upon which it ſtands.

PARADOX

PARADOX X. There are certain Places in *North Latitude*, whoſe longeſt *artificial Day* (that is, from Sun *riſe* to Sun *ſet*) is conſiderably *longer*, than the longeſt *artificial Day* to the Inhabitants in the *ſame* Degree of *South Latitude*.

SOLUTION.——Thoſe Places are at, or near, the *North Pole*, becauſe the Sun ſpends about 8 Days more in the *artificial Day* under that *Pole*, where it continually ſhines from the 20*th of March* to the 23*d of September*, than in the *artificial Day* under the *South Pole*, where it ſhines from the 23*d of September* to the 20*th of March*, as may eaſily be tried by counting thoſe Days in an *Almanack*.

Note; All Places in *North Latitude* have their Summer 8 Days *longer* than the *Southern*. See this explained at Page the 7th.

PARADOX XI. There is a certain *Iſland* in the *Baltick Sea*, to whoſe Inhabitants the *Sun* is diſtinctly *viſible* in the Morning *before* he *riſes*, and in the Evening *after* he is *ſet*.

SOLUTION.——This is *true* of *all Places* as well as of that Iſland; and is cauſed by the *Refraction* of the *Sun's Rays* entering the *Atmoſphere* as he approaches the *Horizon*. The Reaſon of this is exhibited at Page 3rd. The like happens to the *Moon* and *Stars*: And the thicker the *Air* or *Atmoſphere* is, the greater will be the Refraction. With us, the *Sun* is raiſed a *whole Breadth* above the *Horizon* when he is actually below it; and further *North*, and near the *Poles*, much more ſo.——*Note*; This made the *Dutch*, who wintered in 1597 at *Nova Zembla* (in the *Frigid Zone*, where the *Sun* is abſent *ſome Months* in *Winter*) ſee the *Sun* 16 Days before they expected it, and before they could have ſeen it, if there had been no ſuch *Refraction*.

PARADOX XII. There is a Place in *Great Britain*, where, when the Tide is *in*; and the Water *high*, you may ſee the *Cattle* feeding in a certain *Iſland*; but when the Tide is gone *out*, and the Water *low*, *none* can be ſeen, though they are *ſtill feeding* in the *ſame Place*.

SOLUTION.——The *Place* may be the Wharf of *Greenwich*, and the *Iſland* the little Iſle of *Dogs* over againſt it. This Appearance is cauſed by the *Refraction* of the Rays of *Light*, coming from the *Iſland* at the Time of *High Water*, juſt as the *Sun* is refracted by the *Air*. (See Page 3.) And ſeems to be *above* the Horizon, when it is actually *below* it. In like Manner a *Piece* of *Silver*, which cannot be ſeen in a *Baſon* at a little Diſtance, will, if *Water* be poured upon it, immediately become *viſible*.

PARADOX XIII. There is a *certain Village* in the Kingdom of *Naples*, ſituated in a very *low* Valley, and yet the *Sun* is *nearer* to the Inhabitants every *Noon* by 3000 Miles and upwards, than it is at the Time of its *riſing* or *ſetting*.

SOLUTION.——The Sun is *nearer* at Noon to the Inhabitants of any Part of the *Earth*, as well as *Naples*, by the Earth's *Semi-Diameter*, which, by the moſt accurate Calculation, is 4000 *meaſured Miles*, and ſomething more.

PARADOX XIV. There is a *certain Place* belonging to our *Earth*, where, if two Perſons ſhould chance to meet, they would ſtand *upright* upon the *Soles* of each others *Feet*, yet ſtill retain their *natural Poſture*.

SOLUTION.——The *Place* muſt be the *Center* of the Earth: For, if an Hole was made through the Middle of it, from *us*, to our *Antipodes*, (ſee Page 2.) and any one ſhould deſcend in it from *this Side*, and another, at the ſame Time, deſcend from the *other Side*, they would both meet at the *Center*, Feet to Feet, ſtill retaining their natural Poſture.

PARADOX XV. There is a *Place* belonging to this Earth, in which if a *Ladder* be ſet, and 2 Men aſcend it at the ſame Time, it will ſo happen, that the more they aſcend, the further they will be aſunder; notwithſtanding the one ſhould not go a Step higher than the other.

SOLUTION.——This Place is the *Center* of the Earth: For if the *Middle* of the Ladder be placed there, having one Half of it on this Side, the other Half on the oppoſite Side, and 2 Men, at the ſame Inſtant, begin at the Center to aſcend it,—one towards *us*, the other towards the *Antipodes*, they will continually go further and further from each other, though both of them are of equal Height upon it; i. e. at an equal Diſtance from the Center.

PARADOX XVI. There is a *certain Place* in the *Mogul's Dominions*; where, if a Man poſſeſſes only a Piece of Land, but a few Yards ſquare, he can boaſt, that in a *right Line*, he can paſs from Place to Place 3000 Miles, and more.

SOLUTION.——This is *true* of *all Places*, as well as of the *Mogul's Dominions*: for whoever poſſeſſes but the ſmalleſt Piece of Ground, poſſeſſes not only the Surface of it, but is alſo Owner of that which extends quite down to the *Center* of the Earth. Hence it is evident, that all Eſtates, or Lands, are ſo many *Pyramids*, whoſe Points meet in the Center of the Earth, and whoſe Baſes are the Land itſelf. If, therefore, there were made, or conceived to be made, a Deſcent to the Bottom of the Eſtate, or Middle of the Earth,—the true Diſtance would be 4000 Miles or more in a right Line; for ſo much it is from the Surface to the Center of this Globe.

GEOGRAPHICAL THEOREMS or PROPOSITIONS.

Theſe Propoſitions, which are deducible from the Nature of the foregoing Work, the Learner will find to be ſo many *real Truths*, if he properly applies, and contemplates them upon his Globe.

I. Places lying under the *Equator* have *no Latitude*; becauſe the Reckoning of Latitude begins at the Equator.

II. Under the *Poles* of the World the Latitude is greateſt, or juſt 90 Degrees; becauſe the Reckoning of Latitude ends at the Poles

III. Going from the *Equator* towards the *Poles*, the Latitude increaſes; but going towards the *Equator*, the Latitude diminiſhes.

IV. The *Latitude* of any Place is equal to the Height of the Pole in Degrees above the Horizon.

V. Places lying under that Meridian, which is accounted the *Firſt*, have *no Longitude*; becauſe the Reckoning of Longitude begins at that Meridian.

VI. Thoſe Places have the greateſt Longitude which lie under the Meridian, oppoſite to that where Longitude begins.

VII. The Longitude of any Place cannot be greater than 180 Degrees, Eaſtward or Weſtward; becauſe that brings you to the Meridian oppoſite to that, where Longitude began to be counted from.

VIII. No two Places can be diſtant from one another above 180 Degrees; becauſe 180 Degrees is Half the Circumference of a great Circle on the Globe.

IX. All the Inhabitants of the Earth enjoy the *Sun's Light* an equal Length of Time, and have him equally abſent from them.

X. Under the *Equinoctial*, the Days and Nights are always equal to twelve Hours; but not exactly ſo in any other Place.

XI. In all Places between the Equator and the Poles, the Days and Nights are never equal but at the Time of the *Equinoxes* in March and September.

XII. The Difference between the Lengths of the Days and Nights in any Place on either *Side* the *Equator*, is greater in Proportion as the Latitude of that Place is greater.

XIII. In Places exactly under the *Polar Circles*, the Sun appears, when at the *Summer Tropic*, one whole Day without ſetting; and diſappears one whole Day when in the *Winter Tropic*: At other Times it daily riſes and ſets as elſewhere.

XIV. In all Places of the *Frigid Zones*, the Sun appears every Year without ſetting for a certain Number of Days; and diſappears for about the ſame Space of Time. And the nearer to, or further from the Pole thoſe Places are, he longer or ſhorter is his Appearance in or Abſence from them.

XV. To all Places under the ſame Semicircle of the Meridian, whether on the North or South Side of the Equator, it is *Noon*, or *Midnight*, or any *other Hour* of the Day or Night, at the ſame Time preciſely.

XVI. Places lying Eaſtward of any other Place have their *Morning*, *Noon*, and *Evening* Hours earlier than at that Place by one Hour for every 15 Degrees it lies Eaſtward of it.

XVII. Places lying *Weſtward* of any other Place have their *Morning*, *Noon*, and Evening Hours later than at that Place by one Hour for every 15 Degrees it lies Weſtward of it.

XVIII. A Perſon in going *Eaſtward* quite round the Globe, will have gained one Day in his Reckoning of Time above the Account kept at the Place he departed from: But had his Circuit been made *Weſtward*, he would have been one Day behind the Account kept at that Place.

XIX. Two Perſons ſetting out at the ſame Time from a Place to make the Circuit of the Globe, one going *Eaſtward*, the other *Weſtward*, will on their Return differ in their Account of Time by two intire Days.

XX. To all Places within the *Torrid Zone*, the Sun is *vertical*, i. e. comes over the Heads of the Inhabitants, *twice* a Year To thoſe under the *Tropics*, once: But it is never vertical to thoſe in the *Temperate* or *Frigid Zones*.

XXI. People who live to the *North* of the Torrid Zone, ſee the Sun due *South* at Noon; and thoſe who live to the *South* of the Torrid Zone ſee the Sun due *North* at Noon.

XXII. Thoſe who ſee the Sun to the *Northward* have their Shadows projected *Southward*; but when they ſee the Sun to the *Southward*, their Shadows are projected *Northward*.

XXIII. The nearer the Sun is to the *Zenith* of any Perſon, the ſhorter is the Shadow at Noon; but the further from the *Zenith* at Noon, the longer is the Shadow: The Shadow is always oppoſite to the Sun; and thoſe who have the Sun in their Zenith, i. e. directly over their Heads, have no [Length of] Shadow at all.

XXIV. In all Places ſituated in a *Parallel Sphere*, i. e. at or very near the *Poles*, the Sun's daily Motion runs always *parallel*, or nearly ſo, to the reſpective Horizon of ſuch Place.

XXV. In all Places ſituated in a *Right Sphere*, i. e. at or near the Equator, the Sun's daily Motion is *perpendicular*, or nearly ſo, to the Horizon of ſuch Places.

XXVI. In all Places ſituated in an *Oblique Sphere*, i. e. lying between the Equator and the Poles, the Circle of the Sun's daily Motion is always oblique unto, or cutteth the Horizon of ſuch Place at unequal Angles.

XXVII. On the Days of the *Equinoxes* only, that is, about the 20th of March, and 23d of September, the Sun riſes exactly in the *Eaſt* Point of the Horizon, and ſets in the Weſt Point, to every Place upon Earth.

XXVIII. To Places in *North Latitude*, the Sun riſes to the *Northward* of the *Eaſt*, and ſets to the *Northward* of the *Weſt*, from the *Vernal* to the *Autumnal* Equinox; and riſes to the *Southward* of the Eaſt, and ſets to the South-

Southward of the Weſt, from the Time of the *Autumnal* Equinox to that of the *Vernal*.

Laſtly; In all Places of the *Torrid Zone*, the Morning and Evening *Twilight* is *leaſt*; in the *Frigid Zone* it is *greateſt*; and in the *Temperates Zones* the *Twilight* is a *Medium* between the other two.

PARADOXES and THEOREMS reſpecting the *Phænomena* of the *Moon*, the *Planets*, and the *Stars*, as they will appear with more Propriety in a *View* of the *Heavens* and *Uſe* of the *Cæleſtial Globe*; we have therefore reſerved them for a Concluſion to a Work of that Nature, now publiſhing: In the mean Time, give me leave to conclude in the Language of the moſt *divine Perſonage* that ever honoured this Globe with his Preſence;—a *Perſon* to whom we are *all* infinitely indebted; and whoſe Words ſhould have more Influence in pointing out the *Neceſſity* of this *Kind of Learning*, and urging our Purſuits in it, than all the *ſtudied Phraſeology* of the *moſt pompous Writers* or *Orators* in the World.

If I have told you EARTHLY *Things, and ye believe not, how ſhall ye believe if I tell you of* HEAVENLY *Things?*

A GEOGRAPHICAL TABLE,

Containing the NAME, SITUATION, LONGITUDE, and LATITUDE of all the remarkable CITIES and TOWNS in the WORLD.

Towns.	Provinces.	Countries.	Quarters.	Longitude. D. M.	Latitude. D. M.
A					
Aberdeen	Marr	Scotland	Europe	1 45 W.	57 12 N.
Abo	Finland	Sweden	Europe	21 30 E.	60 30 N.
Agra	Agra	Eaſt-India	Aſia	79 0 E.	26 20 N.
Aix-la-Chapelle	Juliers	Germany	Europe	5 50 E.	50 45 N.
Aleppo	Syria	Turkey	Aſia	37 40 E.	36 30 N.
Alexandria	Low. Egypt	Turkey	Africa	31 15 E.	30 40 N.
Algiers	Algiers	Barbary	Africa	3 20 E.	36 40 N.
Amiens	Picardy	France	Europe	2 30 E.	49 53 N.
Amſterdam	Holland	Netherlands	Europe	4 30 E.	52 22 N.
Antwerp	Brabant	Netherlands	Europe	4 15 E.	51 15 N.
Archangel	Dwina	Ruſſia	Europe	40 12 E.	64 34 N.
Aſtracan	Aſtracan	Ruſſia	Aſia	52 0 E.	47 0 N.
Athens	Achaia	Turkey	Europe	24 15 E.	38 0 N.
B.					
Bagdat	Eyraca Ara.	Turkey	Aſia	43 0 E.	33 20 N.
Barcelona	Catalonia	Spain	Europe	2 0 E.	41 26 N.
Baſil	Baſil	Switzerland	Europe	7 40 E.	47 40 N.
Batavia	Java Iſle	Eaſt-India	Aſia	106 0 E.	6 0 S.
Belgrade	Servia	Turkey	Europe	21 20 E.	45 0 N.
Bencoolen	Sumatra	Iſland	Aſia	101 0 E.	4 0 S.
Bergen	Bergen	Norway	Europe	6 0 E.	60 0 N.
Berlin	Brandenburgh	Germany	Europe	14 50 E.	52 31 N.
Bern	Bern	Switzerland	Europe	7 20 E.	47 0 N.
Bologna	Romania	Italy	Europe	11 40 E.	44 29 N.
Bombay	Bombay Iſle	Eaſt-India	Aſia	72 0 E.	18 30 N.
Borneo	Borneo Iſle	Eaſt-India	Aſia	111 30 E.	4 30 N.
Boſton	Maſſachuſets	N. England	Amer.	71 0 W.	42 24 N.
Bourdeaux	Guienne	France	Europe	0 40 W.	44 50 N.
Brandenburg	Brandenburgh	Germany	Europe	13 0 E.	25 52 N.
Breda	Brabant	Netherlands	Europe	4 40 E.	51 40 N.
Breſlaw	Sileſia	Bohemia	Europe	17 0 E.	51 15 N.
Breſt	Bretany	France	Europe	4 30 W.	48 25 N.
Briſtol	Somerſet	England	Europe	2 40 W.	51 30 N.
Bruges	Flanders	Netherlands	Europe	3 5 E.	51 16 N.
Brunſwic	Saxony	Germany	Europe	10 30 E.	52 30 N.
Bruſſels	Brabant	Netherlands	Europe	4 6 E.	51 0 N.
BuenosAyres	La Plata	South	Amer.	60 0 W.	34 35 S.
C					
Cadiz	Andaluſia	Spain	Europe	6 40 W.	36 30 N.
CairoGrand	Lower	Egypt	Africa	33 0 E.	30 0 N.
Cambray	Cambray	Netherlands	Europe	3 15 E.	50 15 N.
N.Cambridg	Maſſachuſets	N. England	Amer.	70 4 W.	42 0 N.
Candia	Iſland	Medit. Sea	Europe	25 0 E.	35 30 N.
Canly	Ceylone	Iſland	Aſia	79 0 E.	8 0 N.
Canton	Canton	China	Aſia	112 30 E.	23 25 N.
Cape of Good Hope	Caffraria	Hottentots	Africa	16 20 E.	33 55 S.
Cape Horn	Delfuego Iſle	Patagonia	S. Am.	80 0 W.	[illegible] S.
Carthagena	Carthagena	Terra-firma	S. Am.	77 0 W.	[illegible] N.
Carthage	Tunis	Barbary	Africa	9 0 E.	36 30 N.
Charles-To.	Carolina	North	Amer.	79 0 W.	32 30 N.
Civita Vecc.	Pope's Ter.	Italy	Europe	12 30 E.	42 5 N.
Cochin	Malabar	Eaſt-India	Aſia	75 0 E.	9 30 N.
Cologn	Cologn	Germany	Europe	6 40 E.	50 55 N.
Conſtantinople	Romania	Turkey	Europe	29 15 E.	41 1 N.
Copenhagen	Zeland	Denmark	Europe	13 0 E.	55 40 N.
Corinth	Morea	Turkey	Europe	23 0 E.	37 30 N.
Cork	Munſter	Ireland	Europe	8 25 W.	51 40 N.
Cracow	Lit. Poland	Poland	Europe	19 30 E.	50 10 N.
D					
Damaſcus	Syria	Turkey	Aſia	37 20 E.	33 15 N.
Dantzick	Pruſſia	Poland	Europe	19 0 E.	54 22 N.
Delft	Holland	Netherlands	Europe	4 5 E.	52 6 N.
Delly	Delly	Eaſt-India	Aſia	79 0 E.	28 0 N.
Delphos	Achaia	Turkey	Europe	22 15 E.	38 30 N.
Dettingen	Wetteravia	Germany	Europe	8 45 E.	50 8 N.
Dieppe	Normandy	France	Europe	1 15 E.	49 55 N.
Domingo St.	Hiſpaniola	Iſland	Amer.	70 0 W.	18 20 N.
Dover	Kent	England	Europe	1 25 E.	51 10 N.
Dreſden	Saxony	Germany	Europe	13 36 E.	51 0 N.
Drontheim	Drontheim	Norway	Europe	10 30 E.	64 0 N.
Dublin	Leinſter	Ireland	Europe	6 25 W.	53 16 N.
Dunkirk	Flanders	Netherlands	Europe	2 20 E.	51 0 N.
E					
Edinburgh	Lothian	Scotland	Europe	3 0 W.	56 0 N.
Embden	Embden	Germany	Europe	6 45 E.	53 40 N.
Erzerum	Turcomania	Turkey	Aſia	41 0 E.	40 0 N.
Exeter	Devonſhire	England	Europe	3 40 W.	50 44 N.
F					
Fe St.	New	Mexico	Amer.	109 0 W.	36 0 N.
Ferrol	Gallicia	Spain	Europe	8 40 W.	43 30 N.
Fez	Fez	Morocco	Africa	6 0 W.	33 30 N.
Florence	Tuſcany	Italy	Europe	12 15 E.	43 46 N.
Franckfort	Wetteravia	Germany	Europe	7 30 E.	50 10 N.
Friburg	Friburg	Switzerland	Europe	6 55 E.	46 50 N.
G					
Geneva	Savoy	Italy	Europe	6 0 E.	46 12 N.
Genoa	Genoa	Italy	Europe	9 30 E.	44 30 N.
Gibraltar	Andaluſia	Spain	Europe	6 0 W.	36 0 N.
Glaſgow	Clydſdale	Scotland	Europe	4 8 W.	55 50 N.
Goa	Malabar	Eaſt-India	Aſia	73 20 E.	15 31 N.
Gottenburg	Gothland	Sweden	Europe	11 30 E.	57 42 N.
Grenoble	Dauphine	France	Europe	5 28 E.	45 12 N.

N. B. The Royal Obſervatory at Greenwich, in Kent, (England) is ſituate in Long. 0° 5' 37" E. and Lat. 51° 28' 40" N.

Towns.	Provinces.	Countries	Quarter	Longitude D. M.	Latitude D. M.
H					
H[illegible]	H[illegible]	[illegible]	Europe	4 [illegible] E.	52 [illegible] N.
H[illegible]gh	[illegible]	[illegible]	Europe	9 [illegible] E.	54 0 N.
[illegible]	[illegible]	[illegible]	Europe	9 [illegible] E.	52 32 N.
[illegible]	[illegible]	[illegible]	[illegible]	8[illegible] 0W.	23 0 N.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	49 20 N.
[illegible]	H[illegible]	[illegible]	Africa	6 [illegible]W.	15 0 N.
I					
[illegible]	[illegible]	Virginia	Amer.	7[illegible] 0W.	37 30 N.
[illegible]	[illegible]	Turkey	A[illegible]	35 0 E.	[illegible] N.
I[illegible]	[illegible]	Germany	Europe	11 30 E.	48 45 N.
I[illegible]	Austria	Germany	Europe	11 26 E.	47 12 N.
Ispahan	Iracagem	Persia	Asia	50 0 E.	32 25 N.
K					
Kingston	Jamaica	Amer. Isle	——	[illegible]W.	17 30 N.
Koningsburgh	Prussia	Poland	Europe	21 50 E.	5[illegible] 40 N.
L					
Leghorn,	Tuscany	Italy	Europe	11 0 E.	43 [illegible] N.
Leipsic	Saxony	Germany	Europe	12 [illegible] E.	51 19 N.
Lepanto	Achaia	Turkey	Europe	30 [illegible]	38 [illegible] N.
Leyden	Holland	Netherlands	Europe	4 [illegible] E.	52 9 N.
Liege	Liege	Westphalia	Europe	[illegible] 30 E.	50 39 N.
Lima	Lima	Peru	S. Am.	76 0W.	12 1 S.
Lisle	Flanders	Netherlands	Europe	3 0 E.	50 3[illegible] N.
Lisbon	Estremadura	Portugal	Europe	9 [illegible]W.	38 42 N.
London	Middlesex	England	Europe	0 0	51 31 N.
Londonderry	Ulster	Ireland	Europe	[illegible] 4[illegible]W.	54 52 N.
Loretto	Pope's Ter.	Italy	Europe	15 0 E.	43 15 N.
Louisburg	Cape Breton	Island	Amer.	61 30W.	45 54 N.
Lubeck	Holstein	Germany	Europe	10 35 E.	54 20 N.
Lyons	Lyonois	France	Europe	4 45 E.	45 46 N.
M					
Madrid	N. Castile	Spain	Europe	4 15W.	40 25 N.
Magdeburg	Saxony	Germany	Europe	12 0 E.	52 25 N.
Mahon Port	Minorca	Island	Europe	4 6 E.	39 51 N.
Majorca	Majorca Isle	Spain	Europe	2 30 E.	39 30 N.
Malo St.	Bretany	France	Europe	2 0W.	48 40 N.
Malacca	Malacca	East-India	Asia	100 0 E.	2 12 N.
Malaga	Granada	Spain	Europe	4 45W.	36 40 N.
Malta	Malta Isle	Mediterranean	Europe	15 0 E.	35 54 N.
Mantua	Mantua	Italy	Europe	11 15 E.	45 20 N.
Marseilles	Provence	France	Europe	5 20 E.	43 15 N.
Martinico	Martinico I.	West-Indies	Amer.	61 0W.	14 30 N.
Mecca	Mecca	Arabia	Asia	41 30 E.	21 20 N.
Mentz	Mentz	Germany	Europe	8 0 E.	49 7 N.
Messina	Sicily	Island	Europe	15 40 E.	38 30 N.
Mexico	Mexico	North	Amer.	103 0W.	20 0 N.
Milan	Milanese	Italy	Europe	9 30 E.	45 28 N.
Mocho	Mocho	Arab. Felix	Asia	45 0 E.	13 0 N.
Modena	Modena	Italy	Europe	11 20 E.	44 3[illegible] N.
Montpelier	Languedoc	France	Europe	3 50 E.	43 36 N.
Moscow	Moscow	Russia	Europe	38 0 E.	55 45 N.
Munster	Westphalia	Germany	Europe	7 10 E.	52 0 N.
Munich	Bavaria	Germany	Europe	11 32 E.	48 2 N.
N					
Namur	Namur	Netherlands	Europe	4 50 E.	50 30 N.
Nancy	Lorrain	Germany	Europe	6 0 E.	48 41 N.
Nanking	Nanking	China	Asia	118 30 E.	32 0 N.
Naples	Lavora	Italy	Europe	15 0 E.	40 50 N.
Nassau	Upper Rhine	Germany	Europe	7 25 E.	50 21 N.
Norwich	Norfolk	England	Europe	1 26 E.	52 40 N.
Nuremburg	Franconia	Germany	Europe	11 0 E.	49 27 N.
O					
Oczakow	Tartary	Turkey	Europe	35 0 E.	46 0 N.
Orange	Provence	France	Europe	4 46 E.	44 10 N.
Osnaburgh	Westphalia	Germany	Europe	7 40 E.	52 31 N.
Ostend	Flanders	Netherlands	Europe	2 45 E.	51 15 N.
Oxford	Oxfordshire	England	Europe	1 15 E.	51 45 N.
P					
Padua	Venice	Italy	Europe	12 15 E.	45 22 N.
Para	Peru	South	Amer.	8[illegible] 0W.	5 0 S.
Palermo	Sicilia	Sicily Isle	Europe	13 0 E.	38 30 N.
Palmyra	Syria	Turkey	Asia	3[illegible] 0 E.	33 0 N.
Panama	Darien	Terra-firma	Amer.	82 0W.	9 0 N.
Paris	I. of France	France	Europe	2 25 E.	48 50 N.
Parma	Parmesan	Italy	Europe	11 0 E.	4[illegible] 4[illegible] N.
Pavia	[illegible]	Italy	Europe	9 40 E.	45 [illegible] N.
Pegu	Pegu	East India	Asia	9[illegible] 0 E.	17 30 N.
Peking	Peking	China	Asia	111 0 E.	[illegible] N.
St. Petersburgh	Ingria	Russia	Europe	31 0 E.	60 [illegible] N.
Philadelphia	Pensylvania	North	Amer.	7[illegible] 0W.	40 [illegible] N.
Pisa	[illegible]	Italy	Europe	11 15 E.	43 43 N.
P[illegible]	P[illegible]	S[illegible]	Amer.	[illegible]W.	22 [illegible] S.
Plymouth	[illegible]	[illegible]	Europe	4 2[illegible]W.	50 2[illegible] N.
Pondicherry	Coromandel	East-India	Asia	8[illegible] 0 E.	11 5[illegible] N.
Port l'Orient	Bretany	France	Europe	3 15W.	47 42 N.
Porto, or Oporto	Entre Minho e Douro	Portugal	Europe	[illegible]W.	41 10 N.
Porto Bello	Darien	Terra-firma	Amer.	82 20W.	9 33 N.
Porto Rico	Porto Rico	Island	Amer.	65 0W.	18 0 N.
Port Royal	Jamaica	Island	Amer.	77 0W.	17 30 N.
Portsmouth	Hampshire	England	Europe	1 6W.	50 48 N.
Potosi	Los Charcas	Peru	Amer.	67 0W.	22 0 S.
Prague	——	Bohemia	Europe	14 20 E.	50 0 N.
Presburg	Upper	Hungary	Europe	17 30 E.	46 40 N.
Pyrmont	Lyppe	Germany	Europe	9 0 E.	52 0 N.
Q					
Quebec	French	Canada	N. Am.	74 0W.	47 35 N.
Quito	Quito	Peru	S. Am.	78 0W.	0 13 S.
R					
Ramillies	Brabant	Netherlands	Europe	4 50 E.	50 46 N.
Ratisbon	Bavaria	Germany	Europe	12 5 E.	49 0 N.
Ravenna	Romania	Italy	Europe	13 0 E.	44 30 N.
Rhodes	Rhodes	Island	Asia	28 0 E.	36 20 N.
Rochelle	Orleanois	France	Europe	1 5W.	46 9 N.
Rotterdam	Holland	Netherlands	Europe	4 20 E.	52 0 N.
Rouen	Normandy	France	Europe	1 0 E.	49 26 N.
Rome	Pope's Ter.	Italy	Europe	13 0 E.	41 54 N.
S					
Salankamen	Rascia	Sclavonia	Europe	21 0 E.	45 20 N.
Salisbury	Wiltshire	England	Europe	1 45W.	51 6 N.
Salonichi	Macedon	Turkey	Europe	24 0 E.	41 10 N.
Samarcand	Usbec	Tartary	Asia	66 0 E.	40 0 N.
Samos	Samos Isle	Turkey	Asia	27 30 E.	37 30 N.
Saragossa	Arragon	Spain	Europe	1 15W.	41 32 N.
Scanderoon	Syria	Turkey	Asia	37 0 E.	36 15 N.
Sevile	Andalusia	Spain	Europe	6 0W.	37 15 N.
Sheerness	Kent	England	Europe	0 50 E.	51 25 N.
Siam	Siam	East-India	Asia	101 0 E.	14 18 N.
Smyrna	Natolia	Turkey	Asia	27 0 E.	38 28 N.
Spaw	Liege	Germany	Europe	5 50 E.	50 32 N.
Stockholm	Uplandia	Sweden	Europe	18 0 E.	59 20 N.
Strasburgh	Alsace	Germany	Europe	7 35 E.	48 35 N.
Suez	Suez	Egypt	Africa	34 30 E.	30 0 N.
Surat	Cambaya	East-India	Asia	72 20 E.	21 10 N.
Surinam	Surinam	South	Amer.	56 0W.	6 30 N.
Syracuse	Sicily	Island	Europe	15 5 E.	37 25 N.
T					
Tangier	Fez	Morocco	Africa	7 0W.	35 40 N.
Temeswaer	Temeswaer	Bannat	Europe	22 0 E.	45 55 N.
Tetuan	Fez	Morocco	Africa	6 35W.	35 40 N.
Thoulon,	Provence	France	Europe	6 0 E.	43 5 N.
Tinmouth	Northumb.	England	Europe	1 0W.	55 0 N.
Tobolski	Siberia	Russia	Asia	63 0 E.	58 12 N.
Toledo	N. Castile	Spain	Europe	4 12W.	39 50 N.
Tornea	Tornea	Lapland	Europe	22 45 E.	65 51 N.
Tortosa	Catalonia	Spain	Europe	0 15 E.	40 45 N.
Trent	Trent	Italy	Europe	11 0 E.	46 5 N.
Triers, or Treves	Treves	Germany	Europe	6 10 E.	49 55 N.
Tripoli	Tripoli	Barbary	Africa	14 30 E.	32 54 N.
Tripoli	Syria	Turkey	Asia	36 15 E.	34 30 N.
Troy Ruins	Natolia	Turkey	Asia	26 30 E.	39 30 N.
Tunis	Tunis	Barbary	Africa	10 0 E.	36 20 N.
Turin	Piedmont	Italy	Europe	7 16 E.	45 4 N.
Tyre	Palestine	Turkey	Asia	36 0 E.	32 32 N.
V					
Valencia	Valencia	Spain	Europe	0 35W.	39 20 N.
Venice	Venice	Italy	Europe	13 0 E.	45 25 N.
Vera Cruz	Tlascala	Mexico	Amer.	100 0W.	18 30 N.
Verona	Venice	Italy	Europe	11 15 E.	45 26 N.
Versailles	I. of France	France	Europe	2 15 E.	48 48 N.
Vienna	Austria	Germany	Europe	16 20 E.	48 13 N.
Ulm	Swabia	Germany	Europe	10 0 E.	48 24 N.
Upsal	Upland	Sweden	Europe	17 30 E.	60 0 N.
Utrecht	Utrecht	Netherlands	Europe	5 0 E.	52 7 N.
W					
Warsaw	Warsovia	Poland	Europe	21 5 E.	52 14 N.
Waterford	Waterford	Ireland	Europe	7 0W.	52 12 N.
Weymouth	Dorsetshire	England	Europe	2 34W.	50 40 N.
Whitehaven	Cumberland	England	Europe	3 16W.	54 30 N.
Williamsburgh	——	Virginia	Amer.	76 30W.	37 20 N.
Wittenburg	Saxony	Germany	Europe	12 20 E.	53 20 N.
Worms	Palatinate	Germany	Europe	8 5 E.	49 38 N.
Worcester	Worcestersh.	England	Europe	1 55W.	52 14 N.
Y					
Yarmouth	Norfolk	England	Europe	2 0 E.	52 45 N.
New York	York	North	Amer.	72 30W.	41 6 N.
York	Yorkshire	England	Europe	1 1W.	53 59 N.
Z					
Z[illegible]	Saxony	Germany	Europe	1[illegible] [illegible] E.	52 52 N.
Zurich	Zurich	Switzerland	Europe	8 30 E.	47 52 N.

This Table will be of great Use to the Learner; for by it, any of these Places, if not already marked on the Globe, may, by their Longitude and Latitude, be easily inserted; and then, the Globe being duly rectified, all the Problems may be performed respecting those Places.

F I N I S.